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REFERENCE BOOK

For Cavalry
PRINCE KRAFT ON CAVALRY.

SPECIALY TRANSLATED FROM THE GERMAN.

S. 317

INDIA

[Reprinted from the "Pioneer."] *was*

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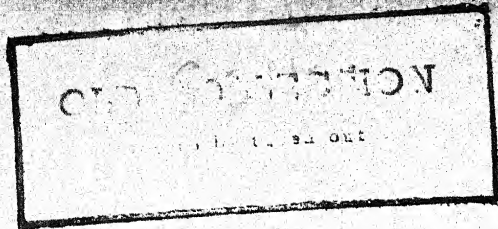
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PRINCE KRAFT'S LETTERS ON CAVALRY.

(Reprinted from the "Pioneer.")

[First Letter.]

To his remarks on cavalry, Prince Kraft devotes twenty letters. The first is introductory and "general," and before embarking on his subject, the Prince owns that he is placed somewhat at a disadvantage, being an artilleryman, but says that, having seen so much cavalry work in different wars, and having commanded a division of the army for seven years, he is not entirely ignorant of its *modus operandi*, and appeals to the "kameradscheff" of the other arms to treat his remarks in a liberal spirit. After remarking on the folly of certain proposals to reduce cavalry on account of its cost, and infantry on account of the performances of the cavalry and artillery in late wars, he draws a comparison between the wars of the last century and early part of the present and that of 1870-71. In the three Silesian wars of the 18th century, there was hardly a battle in which the cavalry did not decide the fight, or, at least, "swept the threshing-floor clean." The decisive battle of Rosobach was, on the side of the victors, fought almost entirely with cavalry. The war of 1870-71 with its more than twenty general engagements, in which the number of combatants was greater than in the 18th century battles, and numerous small fights, only reckons four attacks of large bodies of cavalry. The Prussian attack at Mars-la-Tour and the French attacks at Wörth, Mars-la-Tour and Sedan; and exclusive of these, no other reached the strength of a brigade.

This, of course, raised the cry that cavalry were useless. The "authorities" on cavalry lamented the past glories of Hohenfriedberg, Rosobach, Leuthen, Haynan, Liebertwolkivitz and Laon, and preferred to take blame for their mistakes in employment and leading cavalry in recent wars than "give in"

to such glorious days never recurring :—" We will never again capture 66 standards as at Hohenfriedberg ; for cavalry is not so unendingly superior to the other arms as in the time of our great king. The perfection of fire-arms has excluded cavalry from the sphere of action where such results were only obtained by its quickness in movement." The Prince then remarks on the absence of pursuits after the big battles in 1870, but "as the enemy generally took refuge in fortresses, no one would dare to attack them with cavalry ;" and then with grim humour he observes, "when whole armies capitulate, cavalry are unemployed in their destruction." After many of the big fights in winter the frozen roads hindered pursuit being effective. After some battles, however, pursuit was possible and effective. "I am far from maintaining," says the Prince, "that the employment, leading and work of the cavalry was always perfect—nothing is perfect in this world. Our cavalry in 1870-71 had not less, but not more, mistakes to repent of than the infantry and artillery, and the excellent spirit that animates it is shown by its endeavours since made to rectify these errors and be conscious of them. Cavalry has far greater difficulties to overcome than the other arms in its training and leading, and these difficulties increase in proportion as the demands made on cavalry increase. These demands have now-a-days reached such a pitch that cavalry officers even in peace must be more self-sacrificing, and devote more of their time to study than the officers of the other arms, if they are anxious to carry out thoroughly the duties which devolve on their arm. Formerly a strong arm, a good sword and the courage of a bold rider on a good horse, were necessary to make a good cavalry soldier. These are now only elementary and understood qualifications. The perfection attained by fire-arms has so increased the difficulties against which cavalry has to fight in its training and leading, that more and more exertion and spirit than ever are necessary to overcome them and enable the duties of the future to be carried out. The duties of the cavalry of the future differ in no respect from those of the past. Some of the more brilliant are now more in the background : the more important duties, which create less talk but are never-

theless not less important, have come to the front. Only their execution is more difficult." The Prince then enumerates some of the many duties of the cavalry training in peace, and says this is an indication of the inculcated *geist*. After commenting on the necessity of close co-operation between the three arms—the infantry, in return for the safety afforded by the cavalry, not neglecting to protect the latter in turn when required—he says:—"The days are past in which entire armies consisted of cavalry. Cavalry can only obtain the best results from its employment if, like the artillery, it never forgets that it is merely an auxiliary to the infantry. The infantry is the army, and requires cavalry as well as guns." Commenting on the proportion of cavalry, we find the remark:—"The duties of cavalry are so many, especially on the first outbreak of hostilities, that one cannot keep too large a number of regiments in preparedness for war."

[Second Letter.]

THIS letter treats of the part taken by the cavalry in connection with the results of 1870-71. The first subject dealt with is reconnaissance. "This," says the Prince, "might be disposed of by one sentence if I refer you to the General Staff's War Record, Part I, Vol. 2, page 1305, which relates to the numerous German cavalry, upon whose clear and trustworthy reports the decisive resolves of the chief command of the armies were based, &c.; and the proof of the pudding was the eating," adds our author. Then follows a review of the events from the declaration of war down to the 15th August, the eve of Mars-la-Tour. First come a few remarks on the old employment of cavalry masses in reserve, notably in Frederick's time. In Napoleon I's time the cavalry were used more in advance, but even in 1866 cavalry were kept back and called "reserve cavalry" with a view to launching it "torpedo gleich" at the last moment.

The Prince here indulges in a tirade at the unlucky word "reserve," and instances the remark of a French author—*qu'est-ce que c'est que cette réserve qui n'est pas une réserve*—on

his (Kraft's) proposal on the 18th March, 1869, in the Military Commission in Berlin, for the employment of the "reserve artillery" to prepare the infantry attack. After this the hated word "reserve" was abolished and "cavalry divisions" and "corps artillery" formed. The cavalry at the beginning of the war of 1870 was not employed in the manner in which it was later on; only bold reconnaissances of detached patrols occurred from the declaration of war on 19th July up to the beginning of August. On the 5th August the 4th Cavalry Division made a long reconnaissance to Haynan and Reichshopen, and found strong bodies of the enemy behind the Saar. The same division, however, was seven miles behind the line of battle at Wörth (6th August) because it was not the intention to fight on that day. It was intended to concentrate the 3rd Army, and as the line of the Saar was strongly held, the cavalry was not required. The victories of Spicheren and Wörth preceded the active work of the cavalry. Similarly, the Guard Cavalry Division was not pushed to the front till the 13th August, because the 5th and 6th Divisions were sufficient to protect the front of the 1st and 2nd Armies. However, an officer of the Brunswick Hussars captured Saargemünd with four Hussars and took two companies prisoners. "The bold Lieutenant got the enemy removed from the town by threatening to bombard it with his four men! We thus secured this important defile without firing a shot." The Prince then alludes to the brilliant services of the 5th and 6th Cavalry Divisions in securing the line of the Moselle, and asks whether the battle of the 18th August (Gravelotte) would have been so decisive if the cavalry had allowed the enemy time to destroy all the passages of the Moselle and oppose infantry and artillery on the commanding left bank. The French had lots of time to do it by the 7th, when the results of Wörth and Spicheren must have impressed themselves. A few remarks then follow on the complete ignorance of the French as to the position of the main fighting masses of the Germans. Some critics have blamed the cavalry for not pursuing after Wörth, but, says Prince Kraft, "apart from the fact that the 26 squadrons in direct pursuit on the evening of the battle

brought in 19 officers, 1,593 prisoners, 14 guns and 1 colour, the 4th Cavalry Division was pushed on on the 7th August, and four days later reached Nancy, which lies 64 miles in a direct line from Wörth, and is separated from it by the Vosges. If an utterly defeated enemy flies before us, when he has no more troops capable of resistance, then it is the duty of the cavalry to sweep together the ruins of the beaten army by direct pursuit, and destroy him as an army. Should, however, the victory be only partial, as on August 6th, and should, as after Spicheren, whole armies oppose themselves which have not yet been engaged, then a 'destroying pursuit' by the cavalry cannot take place."

The Prince in this case advocates "indirect pursuit" and threatening the flanks of the enemy. In contrast to active pursuit, he holds up the employment of the cavalry masses after crossing the Moselle: how, in the presence of large bodies of the enemy in an unknown country full of woods and valleys, the 60 squadrons of the 5th and Guard Cavalry Divisions crossed at Pont à Monnon and Dieulouard, and advanced straight into the heart of the enemy's base of operations, opening out and obtaining information as to the *locale* of their fighting masses. Von Trotha's squadron of the Guard Dragoons during the battle of Colombey (August 14th) pushed on to Toul and demanded its surrender. The movements of the 5th Cavalry Division on the 15th August were strategically decisive. It advanced northwards, and found the enemy at Mars-la-Tour: it extended to Jarny and Régouvillle on the line of retreat of 200,000 men of the enemy and bivouacked boldly nine miles ahead of the Infantry Division (advance guard of 3rd Corps), no other infantry having as yet crossed the Moselle. The orders of the chief command for the 16th August were based on the information furnished by this cavalry. "Can we," says the Prince, "demand more than this from cavalry? It trots in mass round the enemy's army, threatens the line of retreat of an army, for the greater part undefeated hitherto, carries uneasiness into their ranks by its boldness, uncertainty and bungling into their orders, and

remains all night so near to the army of the enemy that the chassepôt bullets fall into the bivouacs." The letter concludes with a comparison between the raids of the American war (1860-64) and the action of this cavalry.

[Third Letter.]

THIS letter is devoted to the part taken by cavalry in battle, and comments on the cavalry action at Mars-la-Tour (August 16th); and the Prince treats the oft-discussed and much-vexed question of its employment on that day with clear and concise judgment. The force numbered—

			<i>Squadrons.</i>
5th Cavalry Division	...	...	... 36
6th " "	...	...	... 18
Guard Dragoon Brigade	...	...	... 8
Divisional Cavalry 3 and 10 Corps	...	...	... 16
			—
	Total	...	78
			—

Thirty-seven of these squadrons and 24 guns began the action. Later on they are supported by 18 squadrons and 6 guns of the 6th Cavalry Division, and 6½ French Infantry Divisions are brought into action before the German cavalry are forced to retire on their infantry: thus, 8,250 cavalry checks and causes to deploy 65,000 infantry. "Had we been in the days of Hohenfriedberg, then 55 squadrons would have attacked and ridden the infantry down." From 10 o'clock to 12 the cavalry then formed a supporting line to the long weak fighting line of the infantry of the 3rd Corps d'Armée fighting three French corps; and so the fight went on, the Prussians making eventually no more attacks, but holding on for the arrival of the 10th Corps. The bulk of the cavalry was sent to the left flank, where two hostile corps d'armée were threatening. Marshall Canrobert then attacked with his corps, and danger seriously threatened the struggling 3rd Corps. Not a gun or rifle was in reserve, and Von Alversboen ordered Von Bredow to attack with his six squadrons three of the 16th Uhlans and three of the 7th Bismarck's Cuirassiers. How the brigade rode through the French lines of

infantry and guns is known to the world: it returned a wreck. "This attack has been loudly decried by many authors as useless, without object and result; a sacrifice without motive, which cost the country much money." The Prince then weighs in the balance the loss of 409 cavalymen out of barely 800, against the saving of a corps. The attack took place between 2 and 3 P. M., and the French made no further advance beyond Régouville that day. "Thus considered, this attack of 800 horsemen against 40,000 men resolves itself not only into a deed of heroism of the first rank, equal to the deeds of all ancient and modern war, but with comparatively small sacrifice it obtained results of a magnitude seldom ever attained and was not an 'unnecessary death ride,' nor to be compared with Cardigan's attack at Balaclava, as so many critics are so prone to assert."

The Prince then discusses the remarks of critics as to the want of support to Bredow:—"The fact is, there was no cavalry on the spot to support; time pressed; what was to be done must be done at once, and what cavalry was available at hand was taken for the attack. Where, then, were the 78 squadrons all this time? I hear these critics of the 'green table' ask. The bulk of the cavalry was on the left flank watching the movements of the 3rd and 4th French Corps: superiority was thus obtained at the point most threatened, and the most dangerous of the many dangerous openings to the enemy guarded as much as possible. The remainder of the cavalry were moved from point to point and used where necessary. In this respect the German cavalry left on this day nothing to be desired." The Prince then continues his sketch of the fight:—"Shortly after 4 P. M. the 10th Corps comes up: its 20th Division recaptures the Trouville copses: half of its 19th Division, in attacking from Mars-la-Tour, is confronted by the 4th French Corps. The attack fails, and the division loses heavily and runs the risk of being annihilated; the 1st Guard Dragoon Regiment throws itself at the enemy, breaks through and rides them down; the 38th Brigade rallies, the guns are saved and placed in position again, and the French fall back to their former ground. Half

the regiment is sacrificed (250 horses) to save a brigade. Colonel Von Averswald, already severely wounded, rallies the rest of his dragoons, forms them up, and, with his last breath giving a *hoch* for the king, falls dead from his horse. This reminds us of the heroic deeds which the Greeks and Romans tell of their bravest and best." Immediately after this charge the big cavalry fight north-west of Mars-la-Tour (on the Prussian left) was begun. Twenty-one squadrons of Prussian cavalry are here engaged with the regiments of Generals Montaign, Legrand and de Franc. The cavalry on both sides is well handled; eventually the French cavalry is forced back and then retreat, covered by 20 squadrons of General Clérambault, which, however, do not attack; the Prussian Cavalry reforms and resumes its place in the infantry fighting line, which, meanwhile, has had time to reorganise at Trouville: darkness then sets in. The Prince then comments:—"Some persons," he says, "have condemned the above attacks on the Prussian right and French left: the ground did not allow of cavalry action. On the Prussian left, it did. Here their infantry had been checked and repulsed, therefore the French used their cavalry on this flank, and consequently the Prussians made a corresponding use of theirs. The cavalry duel was not without result. The Prussian cavalry had the advantage in the end. No brilliant defeat was inflicted on the enemy's cavalry, but they were eventually pressed back, and the Prussians remained masters of the field. Everything was attained that was desired: the infantry were enabled to again come to the scratch, the balance was restored, and night came down without any further hostile advance. If any reproaches are to be made on the cavalry, let them fall on General Clérambault's five regiments for not attacking. They hereby lost their chance of turning the Prussian success into a defeat."

The letter closes with some remarks on the chances the French had on that day of defeating the Prussians. The Prince attributes their hesitation to use their reserves to the fact that the bold action of the Prussian cavalry, artillery and infantry made them believe that strong masses were coming up to their

support. He says :—" Had Bazaine, on the morning of the 17th, made an attack with all his intact reserves at daybreak, the result against the exhausted Prussian troops could hardly have admitted of doubt. Who will then dare to speak of the cavalry losses when compared with such great results ? The last attack made at nightfall cost 360 horses—the loss would have been less probably had darkness not set in,—who can then talk of useless sacrifices ? "

This letter of Prince Kraft's, we think, forms one of the best criticisms on the oft-discussed Mars-laTour that there is. It is pleasant reading, gives one a good idea of the fight, and there is not a superabundance of detail. He hates men who criticise war who have not seen it : and rightly, too. What a number of books might never have been published had their authors had a talk with Prince Kraft beforehand.

[Fourth Letter.]

PROTECTION OF THE INFANTRY.

PRINCE KRAFT opens his fourth letter with a short review of the action of the cavalry preceding the battle of Gravelotte. The reconnoitring of the Uhlan Brigade of the Guard Cavalry westwards on the 17th August, 1870, beyond the Meuse, enabled the German corps between the Meuse and Moselle to direct their westward march with safety in a northerly direction and support the corps which had fought on the 16th. Any advance of the enemy from the west would have been known two days before they could have been in a position to attack. Similarly, the XIIth Saxon Cavalry Division, pushed to the north-west, ensured the army from danger from Verdun, and confirmed the supposition of the bulk of the enemy's forces being still at Metz. Dispositions were thus made for a decisive battle on the 18th. On that day, on the German right, the French positions were so near that the Cavalry Divisions with this part of the army were massed in reserve. On the left, the Saxon Cavalry worked towards Verdun and Etain. Less brilliant, but not less active and devoted, was the

part taken by the divisional cavalry in the fight. A squadron of Hussars reported French troops at St. Marie Aux Chênes, and ascertained that the French right extended beyond Amanvillers and did not end there as was thought. The Guard Corps was thus directed *via* St. Ail on St. Marie Aux Chênes and captured it. Prince Kraft led his corps artillery and the artillery of the 1st Guard Division into action in advance of the infantry. Some of the Hessian cavalry reconnoitred his front and fell back through his guns; his right was secured by the IXth Corps, but the enemy's skirmishers from St. Ail made him anxious about his left. He hastened there, and his mind was set at rest by finding the whole of the Guard Hussars drawn up quietly in a hollow of the ground and affording him complete protection. There was no big cavalry attack on the 18th. The character of the fighting forbade it. The cavalry then, when not reconnoitring the advances previous to fighting, remained ready behind the front. The Prince then comes down on his enemies "the critics" for maintaining that there should have been a cavalry pursuit after St. Privat was stormed and the battle won. This was impossible on the German right, for the French here held their positions, and on the left withdrew into Metz by the wooded country: those that remained by St. Privat were either killed or captured. Next day, 19th, the cavalry were early astir, and reported the enemy as having evacuated his position entirely and withdrawn into Metz.

Then follows a short review of the operations of the cavalry up to Sedan. After Gravelotte, the Army of the Meuse was formed (Guard IVth and XIIth Corps from the II Army), and with the III Army operated against Chalons and Paris. The march on Paris was begun on August 23rd. On the evening of the 24th Chalons was reported evacuated, and in this reconnoitring the cavalry covered over 80 miles. On the 25th Macmahon was reported on the march northwards, trying to get round the German right flank and join hands with Bazaine. During the night of August 25th-26th the advance westwards was stopped, and the armies directed northwards. The cavalry divisions of the Guard

and XIIth Corps now took up the reconnoitring. On the 27th "some of the most dashing of our cavalry officers reported the enemy at Vouziers ; one of these, Lieutenant Von Ziegler of the 3rd Guard Uhlans, covered on this day nearly 80 miles." The first collision occurred on this day at Buzancy, and on the 29th the Guard Uhlans captured a general staff officer, on whom they found the march dispositions of the enemy for the next day. The result of this was the surprise of the French at Beaumont on the 30th. The Prince compares the action of the cavalry before Beaumont to that of a swarm of bees attacking an intruder on their hive, and tells how he watched a French column of close on forty battalions defiling for several hours, and being incessantly brought to a halt by the daring of a handful of "Uhlanen." The exhaustion of the enemy's infantry previous to Beaumont was terrible. On the other hand, the German infantry slept soundly every night in their bivouacs. After Beaumont, the cavalry prevented the French from breaking into Belgium and completed the encircling of Sedan. The Guard Cavalry captured a provision column which supplied the corps with food for eight days.

Referring to the battle of Sedan, the Prince remarks that there was no "striking action played by the cavalry in the actual battle." Small attacks took place, but they were the result of "the impatience produced by inactivity in action." There was no pursuit, for the French army capitulated. The divisional cavalry, however, was untiring in its exertions during the battle in reconnoitring the ground and protecting their respective infantry divisions. Prince Kraft relates how some of the cavalry rode over the ground in front of his guns and between him and the French, and brought him much valuable information as to the nature of the ground and dispositions of the enemy. "The services," he says, "which this divisional cavalry rendered to the infantry were so valuable that, even during the long position fighting round Paris, almost every company which had to perform the most minor work used to beg for a few troopers to report and patrol." After Sedan, Prince Kraft was ordered on the 5th September to reduce Mont-Médy by bombarding with field

artillery. When he got there he found that the cavalry had the previous evening so thoroughly reconnoitred and surrounded the place that he was enabled at once to make his dispositions. The letter concludes with a few remarks on the action of the cavalry during the siege of Paris and to the end of the war. It was chiefly employed protecting the lines of communication, on field post service and communicating with the Orleans and north troops, &c., with regard to which he observes :—" With astonishment then do we read, in the face of these services, in a certain pamphlet, the assertion that the great mass of cavalry which we had with the army before Paris remained inactive and was useless. In reality we had not a single cavalryman too many, and, had we had more, would have been only too glad of their services." Raids would have been useless on account of the railways, and the cavalry was better employed as it was.

[Fifth Letter.]

This letter treats of the saving afforded by the use of cavalry to the strength of the infantry. Owing to the cavalry the German infantry were relieved from all the " harassing work " of outpost duty on the march, and could devote all their energies to marching. In spite of this, the exertions of the infantry, owing to the long marches, were enormous and cost them many men. The Guard Corps crossed the Rhine on August 3rd, 30,000 strong : St. Privat cost it nearly 8,000, and Sedan 350, so that it reckoned some 13,000 after the latter battle. On the day Paris was invested it mustered 9,000 bayonets. Thus, not counting fighting losses, it lost over 12,000 from march exertions and other causes. Had the cavalry not relieved it from patrolling and outpost service, the Guards would have arrived before Paris with hardly any infantry at all. These are stern facts, but facts nevertheless. The " march performances " of 1870 by far surpassed those of any previous campaigns. The Guards marched 120 German (720 English) miles from August 3rd to September 19th. In these 48 days they had only four " rest days " and took part in three pitched battles. Other corps performed equally wonderful marches. Without the cavalry swarm in front such

marching would have been impossible. Advance guards were invariably thrown out, but merely to act as a support to the cavalry and supply sentries, &c., round the halting places, and also to discharge a certain amount of outpost duty. During the night this lightened the reporting work of the cavalry considerably. The bulk of the infantry of the corps, as a rule, seldom bivouacked on the march. Bivouacs were resorted to when, owing to concentration before decisive movements or battles, there was not sufficient accommodation, as occurred before and after St. Privat, and after Beaumont and Sedan. However, before Sedan the whole of the Guards were housed for the night. The security afforded by the cavalry then was the cause of the infantry being always "einquartiert" when possible, as the worst quarters are better than the best bivouac. Of this Prince Kraft says:—"Any one who has bivouacked in pouring rain can imagine the joy with which the tired infantry greeted covering in villages, barns, &c., and could dry their clothes: and to whom were thanks due? To the cavalry, out in front with the enemy and having the bad weather in the open." The letter concludes with the following recapitulation, classified, as the Prince says, to form a basis for future assertions:—

"1. The cavalry divisions pushed far to the front, swarmed round the enemy, prevented him from obtaining information of our movements, while keeping our chiefs informed of all. In fact, they enabled us to 'give the law to the enemy,' as Clausewitz has it, making him fight where and when we wanted him to. That was half the battle. The enemy groped in the dark: we saw clearly. When a blind man fights with one who can see, be he ever so strong, he must be beaten. When Ulysses deprived the Cyclops of his eyes, he rendered him incapable of harm.

"2. The cavalry divisions wearied the enemy and relieved our own infantry from much exertion: by means of this we were enabled to make far greater march performances than they. In conjunction with the divisional cavalry they almost entirely relieved the infantry from all outpost and patrolling duties incidental to the march.

"3. In one battle (Mars-la-Tour) the cavalry, in conjunction with the last efforts of the infantry, turned an undecided battle into a victory in our favour.

"4. In different battles and fights the cavalry enriched the victory by energetic pursuit, direct and indirect, and magnified the importance of the conquest.

"5. While the other arms were engaged, the divisional cavalry played an active rôle in reconnoitring, flank protection, &c.

"6. One of the duties of cavalry, that of covering the retreat, it had little to do with in 1870, for we suffered no complete defeat at any time. In the single battle which went against us, Coulmiers, the cavalry did all that cavalry could do under the circumstances.

"We cannot deny that the results obtained by our cavalry would not have been so striking had the enemy employed theirs in like manner. Their cavalry was kept as a last reserve to be used at critical junctions in the old traditional style, and when so used, repeatedly came to grief. But this speaks more than anything for the great value we must assign to cavalry; for had the enemy employed his cavalry, as we did ours, we would have seen the opposing cavalry veils meet before the great battles, and after that the cavalry which obtained the mastery would alone have played the rôle which ours did all along. I have no doubt that our cavalry would have come out victorious, but would it then have been strong enough to be in a state to perform what it did? I not only believe, but am positive, that people would then have allowed that we had not too many but too few cavalry."

[Sixth Letter.]

THE limitation which fire exercises on the action of cavalry in battle is dealt with in this letter, and historical examples are given. The Prince opens with remarks on the changes brought about by the fire of rifled guns and rifles in cavalry tactics, and

tells us how a friend of his, a cavalry officer, was very dissatisfied with the way his cavalry was treated at the last manœuvres, for he was always ordered to attack *unbroken* infantry, and rightly too, for, to be ordered to attack infantry unshaken hitherto, naturally causes one to be put out of action.

Nevertheless, in later wars, instances occurred of cavalry obtaining remarkable results even against fresh infantry. At Custozza the two Austrian brigades—Pulz and Bujanowics—numbering 15 squadrons (squadrons 150 to 160 strong), some 2,400 sabres, attacked the Italian infantry at the commencement of the battle. Pulz's brigade attacked the divisions of Humbert and Bixio in front: they rode down the skirmishing line, broke several squares, and carried terror into the rearmost lines. Most of the infantry battalions found cover among the trees and opened a murderous fire on the cavalry, which nevertheless fell back again through their lines. The result of this attack was the exclusion from the fight for the rest of the day of 36 battalions, and, although the attack took place at 7 A. M., at 4 P. M. the Italian infantry were still under the paralysing effects of the bold charge of the Imperial Cavalry. Nor was the latter incapacitated from further action, for they kept the same infantry from coming to the assistance of the main Italian army, and at 5 P. M. delivered a second attack, capturing over 1,000 prisoners, and eventually forced them to lay down their arms entirely. Thus 2,400 cavalry wiped out 25,000 infantry from the fight, and materially contributed to the Austrian success. It would have gone hard with them had these divisions "come-again" at 5 P. M. At the same battle three sections (züge) of Austrian Uhlans, with a loss of 2 officers, 84 men and 79 horses, created such a panic by their attack that they rendered 4 Italian battalions useless. The Prince then gives two similar instances from Königgrätz. One squadron of Prussian Dragoons swept down on an Austrian battalion demoralised by shell fire, and captured 3 officers and 70 men. The 1st squadron of the 10th Hussars surprised an Austrian battalion and captured 16 officers and 665 men, suffering no loss themselves. Referring to the Austrian retreat after Königgrätz,

the Prince observes that but for these cavalry covering it and opposing the Prussian cavalry, their army would have been entirely lost between 4 and 5 P. M.

Contrasted with the success of the Prussian charge at Mars-la-Tour is the unsuccessful charge of the French Cuirassiers at Wörth. An infantry officer relates as follows to the Prince :—
 “After our attack failed we fell back down the hill : a hail of Chassepôt and mitrailleuse bullets followed us, and no one hoped to reach the wood alive. Wearied to death, but also devoted thereto, the whole of the infantry crawled back to this wood. Suddenly the murderous fire ceased, and we turned round in astonishment to look for the cause. We then saw the French cavalry coming down on us, thus masking the fire of their guns and infantry. This cavalry we welcomed as a saving angel : with quiet and steadiness we waited, each where he was, and then opened a rolling ‘schnellfeuer’ before which the Cuirassiers disappeared.”

Referring to the charge of the French Guard Cuirassiers on the Prussian infantry at Vionville, a cavalry friend of the Prince's relates to him how, when ordered up to support the infantry while the French were still at some distance, he found his services unnecessary, and was full of admiration for the infantry steadiness and trust in their line formation and “schnellfeuer.” He then tells how his “cavalry heart” bled when he saw these magnificent squadrons mowed down like corn when the infantry opened fire. The centre of the attack was entirely destroyed : the wings charged past the firing line and were destroyed by the supports :—“In a few minutes then nothing remained of a once splendid regiment of cavalry except a few troopers who had not even touched anyone with their swords.” In like manner Gallifet's cavalry at Sedan were destroyed in their attack near Fleigneux (page 1239, official account). The letter closes with the following *résumé* :—

“Looking at these experiences, we conclude that successful cavalry attacks on infantry have occurred in greater or less extent

in the latest wars, and will occur should even the cavalry be less in number than the enemy. As a rule, the attacks will only be successful entirely when the infantry have had inroads made on their powers of resistance by fighting, owing to surprise or other causes. A frontal attack on unbroken infantry will seldom succeed. The episodes in the Battle of Custoza, where at Villa Franca and Mongabia cavalry achieved such signal success against unbroken infantry, induce us to believe that the infantry, from some cause or other, could not have had the spirit that unshaken troops should have. But on this account even we must not, as a principle, condemn the attack of cavalry against unbroken infantry—(the cavalry at Custoza did not know the spirit of the Italian infantry before the attack took place)—but approve of it if the conditions of the fight are such that the cavalry, even when it sacrifices itself, renders more signal service to the army as a whole than their loss warrants. We see further that cavalry attacks, as soon as they mask the fire and cover the front of their own infantry, give the attacked infantry, on account of the cessation of fire, time to rally. Cavalry must always endeavour, when fighting with other troops, to lead their attack round by a flank and fall on the enemy's flank, and thus enable their own side to keep up their fire as long as possible on the enemy."

The *résumé* concludes with a criticism on General Von Wechmar's idea of divisional cavalry charging between the sections of the infantry attack and thus making their advance easier. This of course would, as the Prince says, lead to sacrifice of the cavalry and disorder in the infantry.

[Seventh Letter.]

DEVOTED particularly to the part which cavalry will play in battle in the future, this letter opens with a dissertation on the distance which cavalry must remain from the enemy owing to the effect of modern fire-arms and guns. Shrapnel ranges to 3,000 mètres, rifle fire is effective at 1,200 mètres; to some considerable extent cavalry in mass could not remain halted under either fire at these ranges with impunity. The cavalry masses,

destined for an attack, must, supposing the ground to be flat and open, consequently remain nearly one English mile from the line of the enemy's infantry, and over two English miles from their artillery as long as the moment for advancing to attack is not deemed to have arrived. Now, what is the result of this position? "At the distance of two miles it is very difficult to hit off the right moment for attacking: thick clouds of smoke hide the scene of the fight, one sees lines of men moving hither and thither, cheers are heard mingled with the rattle of the infantry fire and the rolling thunder of the guns; all uniting in making a tumult from which it is difficult to tell how the fight goes. The attacking lines of infantry, at first regularly formed, are broken up into knots and groups. One sees men hurrying about through the smoke, and friend cannot be distinguished from foe. Granting that the cavalry seizes the right moment for 'cutting in,' it has two miles to cover before it can deliver its attack. This distance will be increased on account of the cavalry having to ride round by a flank, and, supposing there is doubt as to which flank of the enemy should be attacked, most probably the attack will halt in rear of the centre of the fighting line. Should the force cover the distance at the gallop, 19 minutes at least must elapse before it closes, and, taking the trot as the pace most likely to be employed throughout by cavalry in mass, considerably over half an hour will elapse before the attack can be delivered. But in this half-hour what may not have become of the fight? The enemy's infantry may have rallied, reserves come up, &c. In battle hours sometimes pass in which no change occurs, but episodes occur in which every minute shows a changing scene. Such are the times when cavalry can do wonders if it acts on the moment. But what do you think of the making use of a critical moment should you take half an hour to do it? That is the result of theory on the *tabula rasa*. But there never was a battle-field yet which could show a *tabula rasa*, therefore 'dim is all theory which is based on the above lines.'

After thus dealing with "text-book theory," the Prince goes on to give instances of cavalry making the very most of the

features of the ground, such as bushes, small woods, hedges and villages behind which it can halt unseen nearer to the enemy, who cannot harm it if he is unaware of its being there. Folds of the ground sometimes conceal entire divisions. "The well-known hollow on the Tempelhofer Feld, near Berlin, has been the cause of many elegant movements at field days, and brought many a leader to grief." Such hollows can be more easily made use of for screened approach if the attention of the enemy is diverted to another part of the field. The Prince then gives two instances of his having achieved signal success with his cavalry at manœuvres by making use of such "terrain features." At Königgrätz, while the Prince's batteries were engaged with 120 Austrian guns, the Prussian infantry advanced on the Austrian batteries in front of the Prussian through high crops in the intervening valley. So intent were the Austrian batteries in the artillery duel that the first they saw of the Prussian infantry was the closed battalions in the third line: the skirmishers were now close on the guns and 65 were captured; the remainder limbered up and got off: the position was won. Prisoners afterwards related how they wondered at the Prussian infantry getting so near in mass. The Prince then argues that there is no reason why cavalry should not in like manner, by making every use of the "terrain," get on the enemy's flank. Instances then follow of the failure of cavalry manœuvring in the open and halting in the open under fire—notably that in which the Prince's batteries at Gravelotte, in the position St. Privat-Amanvillers, opened a quick fire at 1,900 paces from 40 guns on the head of a French cavalry division, which remained halted on the chaussee from Metz to St. Privat, while the rear regiments were forming up. The 1st Prussian cavalry division suffered heavy loss likewise in the Gravelotte defile.

Another element, however, sometimes occurs which offers favourable chances for cavalry. It is that in which neither the attention nor the fire of the enemy is drawn to the cavalry in rear of the lines on account of the other opposing arms being too much occupied—infantry with infantry, guns with guns—in

fighting each other. The time for the cavalry most favourable for being let slip is that in which the last energies of the combatants are put forth for the mastery. Distant fire and chance shots falling among the cavalry would be neglected. In every case where there is uncertainty by which flank to operate, the cavalry should remain in rear of the centre. The ideal position for cavalry to occupy is one in which their leader can halt near the chief-in-command. He can thus get the orders for his work by word of mouth from the latter without being far removed from his command. The chief-in-command is the man who "has his finger on the pulse of the fight," and can best judge when the cavalry can advantageously cut in (eingreifen). Several instances then follow of cavalry getting up to the enemy unperceived, and also of single officers and men finding themselves in the enemy's ranks unnoticed by the latter.

In the latter part of the war of 1870-71 the cavalry had no opportunity of attacking in mass or "battle deciding." This led people to conclude that they could no longer do so, but the conditions of the latter campaigns were so abnormal that no rules could be devised for cavalry employment. Frost and snow hindered the working, and restricted the cavalry a good deal to observation and demonstration. As the enemy employed long lines of infantry, the German cavalry were frequently detached to a flank to prevent their own infantry being outflanked: a risky piece of work, but adopted because the French infantry was inferior in quality to that of the earlier days of the war. However, there were some pretty pieces of cavalry work done in the fighting round Orleans, at St. Quentin, Pouprie, &c., yet nevertheless the idea took root in people's minds that cavalry should chiefly be used thereafter as mounted infantry. The Prince then goes on to say that in his opinion, based on his war experiences, cavalry can still, despite modern fire-arms and guns, be used with great effect in the offensive, and that on the defensive still more favourable opportunities for its employment will arise. On the defensive, the distance it will have to recover before delivering the attack will be much less than in the offensive battle, because it has

the choice of ground beforehand. The "terrain" can be reconnoitred and known before fighting commences. The principle of moving round by a flank so as not to mask fire must still be observed.

The Germans had very little experience in 1870 of defensive cavalry action, because their battles were nearly all offensive. The fighting round Paris and Metz, being between opposing forces in entrenched lines, and the proximity of large forts, excluded cavalry masses from action. However, Bredow's attack at Vionville, the Guard Dragoon charge at Mars-la-Tour, and Colomb's at Poupry may be regarded in the light of defensive cavalry action, but not in the true sense of the word. They were improvised defensive attacks resulting from the changing phases of the battle. The Prince continues as follows :—

"You may gather from all I have said in my long letter that I am of opinion that cavalry will, in the future, be still able to play a decisive part in action if it be so led that it operates from a flank, and so allows of the fire of the other arms being utilised as long as possible. The necessity, however, of covering a German mile at speed will nevertheless sometimes occur before the attack can be delivered. Can it do this? It *must* be able to do it if it wants to be available as 'battle cavalry.' The way it can accomplish this is by systematically getting the horses in 'wind training.' When I, as a division commander, used to inspect the squadrons separately, and after having seen them manœuvre at the regulation trot in service marching order, I used to then make them do the same at the regulation gallop, and keep the latter pace up for at least six minutes. Many squadrons indeed kept galloping for ten or eleven minutes on end. Next followed the long regulation attack, after which came a 'swarm attack,' and then I ordered the 'dismount' and looked to see how many horses were heaving at the flanks. They had covered over a mile (German) at the trot and gallop, attacked and remained throughout fit to fight. How this may be attained, I will tell you later on."

[Eighth Letter.]

AFTER a few recapitulatory remarks we find the Prince coming to the conclusion that the devotedness of the cavalry in 1870-71 was quite as great as that of the cavalry in the Seven Years' War. "The times for great *results* like Roszbach, Leuthen and Zorndorf are past, but not for equally bold *deeds*." He then continues:—"The keenest advocate of cavalry must acknowledge unconditionally that it must invariably go down before intact, well disciplined, well led and *morally* unbroken infantry, unless it can surprise the latter. Cavalry being so restricted in its sphere of action on the battle-field, has now given the bulk of its 'work' to reconnoitring and security of service."

Some remarks on pursuits then follow. Direct pursuits cannot last long—prisoners require escorting, and this weakens the effective strength of the cavalry. Referring to the indirect pursuits, the Prince recapitulates what he already said in a former letter. The reason why the Prussian cavalry after Wörth lost touch with Macmahon's beaten troops was on account of orders to wait till the main army under Bazaine was dealt with.

The Prince next deals with the critics who blamed the cavalry for the distance they were ahead of the infantry, and advises them to send their reproaches to the then commanders of the armies, for it was they who regulated the distance to be observed by the cavalry divisions. Should the cavalry divisions remain in communication with the army, as a rule they should not exceed two to three days' march ahead for various reasons. Hostile inhabitants will be deterred from cutting off scouts and patrols on account of the proximity of infantry support to the cavalry. Cavalry *operating by itself* cannot do without fire-arms, consequently the horse artillery, as well as dismounted carbine parties, will be frequently employed. Reserve ammunition will be necessary, without which the cavalry will be powerless against even small infantry parties.

The Prince remarks later on:—"It is of the greatest importance that the information which the cavalry obtains regarding

the enemy should reach Head-Quarters on the night of the day following that on which the events reported occurred. This will be hardly possible should the distance to Head-Quarters exceed 10 miles (45 English miles). The experience of the last war taught us that the cavalry were seldom more than three days' march ahead when they accomplished their most brilliant services in this respect." The cavalry of the 3rd Army Corps and Meuse Army was pushed farther ahead than any, when, after Gravelotte, they reconnoitred to Chalons. When the most *advanced scouts* reported the camp at Chalons evacuated on August 24th, they were from 38 to 45 English miles distant from the *corps d'armée*. When the army reached Paris the *advanced scouts* (spitzen) were only from 24 to 28 miles distant from the corps.

The experience of 1870 must not be taken as sufficient to warrant the laying down of rules and principles, because the enemy did not use his cavalry in a corresponding manner. "No French cavalry division ever reconnoitred far ahead of any of the French armies. And it must be acknowledged that affairs would not have turned out as they did had this been the case." The Prince then, with a touch of quiet humour, observes :—"Had the French cavalry been employed as well as the German, there would have occurred what *will* occur in the future if the cavalry of both the contending armies is equally properly employed."

What should happen he thus describes :—"Both armies will send out their cavalry masses : the officers' patrols will seek to find out the enemy, his strength and intentions. The masses will then meet and fight for the mastery. Eventually one of the two opposing cavalries will obtain the upper hand, and drive back its opponents on their infantry, which then puts it in a position to enable the chief command to secure strategical superiority, as did the German cavalry in 1870. When, then, the operations lean to a decisive battle, the cavalry, which was at the commencement in rear of the two other arms, will, in all likelihood, endeavour to take part in the 'decision' of the fight.

Should the opposing cavalries seize the right point and 'moment' (augenblick), they will thus again come against each other, and whichever is first driven from the field, will lay the other arms on its own side open to attack. The victor will then try and enrich the victory by pursuit: the defeated side tries to cover the retreat. Should the latter have still any formed bodies of cavalry at his disposition, these should be employed before the other arms, and only after this cavalry is defeated can the victor turn his pursuit against the other arms of the enemy. When the *direct pursuit* has ceased, it will then be the duty of the cavalry of the defeated side to try and counteract as much as possible the indirect pursuit to which the victor will now turn his energies. The defeated side will be weak in cavalry now, but it must do its best under the circumstances, and try and manœuvre as skilfully as possible. In two only of these four different cases—(1) cavalry mass *vs.* cavalry mass; (2) cavalry mass *vs.* infantry; (3) cavalry *vs.* cavalry in battle; (4) cavalry in pursuit—will it fall to the lot of the *cavalry division* to attack the other arms, and then only when they have defeated the opposing cavalry. In the two remaining cases purely cavalry fights will take place. There is thus the probability that the cavalry will always, in the first instance, have to deal with cavalry, and also when, later on, it attempts to attack the other arms; and in most cases of cavalry *vs.* cavalry, it must husband its strength. In the face of all this, what have the critics been yelping at about useless cavalry duels and 'private battles,' which the cavalry have engaged in on their own account, and about their combats fought out of unison with the whole? As if it lay in the power of their leaders to avoid such cavalry duels, and as if these should not occur from the nature of the fighting. Or perhaps such critics wish to see our cavalry in the next war, in order to avoid such cavalry duels, breaking before the enemy and retiring behind the infantry, thus yielding all the terrain to the reconnoitring of the enemy, and giving him the strategical counterpoise at the beginning without striking a blow! Should this ever happen, *then* let the most severe critics come down on the cavalry,

for it would be then right that it should incur blame, for our chiefs-in-command would have to fight with bandaged eyes."

The Prince thus concludes this interesting latter half of his letter with a slap at his old friends, the critics.

We would draw attention to the qualities the Prince considers infantry should possess to be able to defeat cavalry—the absence of *one* of these might end in their defeat ; and also how he lays stress on the cavalry doing their best to cover a retreat after supposing them beaten in the cavalry combat and on the field of battle.

[Ninth Letter.]

SHOULD RAIDS HAVE BEEN MADE IN 1870-71 ?

THE reproaches levelled at the German cavalry in the Loire campaign of 1870 for remaining inactive when the army was halted induced the Prince to consider the subject of raids. People said that the cavalry should have made far-reaching inroads into the heart of the enemy's country and impeded his mobilisation.

The raids of the American War were wonderful, and earned great fame. Talking of them, the Prince remarks :—" Whose heart does not beat higher when he reads *Two Years in the Saddle* by Heros Von Borcke (translated from the English by Kähler) ? What poetry there must be in such raids in which large cavalry masses, independent and thrown on their own resources, performed enormous marches, fell on the enemy suddenly in flank and rear, vanished, and again carried terror and dismay into the enemy's camp, at the same time supporting and encouraging their own people ! One thinks, in spite of oneself, of Wallenstein's cavalry soldier, who sang—

Frei will ich leben,
 Frei will ich sterben,
 Niemand berauben,
 Niemand beerben,
 Und auf das Gesindel unter mir
 Stolz herabschuen von meinem Thier."

"But," adds the Prince, "poetry is only pretty if it has reality as a background, without which it becomes a daub. For, 'du sublime au ridicule il n'ya qu'un seul pas.' Therefore we should consider such raids by looking at them through the sobering glasses of reality." The Prince understands by the term "raid" a body of cavalry quite independent, cut off from the army, unable to reckon on support of any kind, and led at the will of its commander. A raid must have an object, otherwise the mere riding across the enemy's country would lead to nothing in proportion to the force cut off from the army. The proposal made in 1870, that the German cavalry should "ride between the mobilisation of the French," might have led to the capture of a few *franc tireurs*, but would not have affected the concentration and mobilisation of the 200,000 men under Aurelle de Paladines. The only possible way of raiding, in the Prince's opinion, would be to make for the point of assembly of the enemy's newly-organised forces, disperse them and burn their equipment and stores. The time to have done this was after Sedan, when France had been robbed of most of her regular troops and was paralysed by defeat and change of Government. In fact, the 4th Cavalry Division did actually start with this intention. (*General Staff Work*, p. 223). It attacked the enemy's troops of all arms on September 25th at Bazoches les Gallierandes, defeated and pursued the enemy's cavalry, September 26th, but was stopped by infantry at Chevilly, and had to fall back with the intelligence that the whole of the north of the Forest of Orleans was occupied by French infantry. "A combined advance of cavalry masses in this close country did not appear advisable. Thus the 'riding between' the enemy's mobilisation by the 4th Cavalry Division came to an end. Vonder Tann coming up defeats the enemy at Astenay and captures Orleans, October 11th."

This was the most favourable period for raiding against the enemy's mobilisation. For instance, against Bourges, where the French had a gun factory, &c. Tours, the seat of the Government, might have been another raid object: also Le Mans,

where new forces were being assembled and stores concentrated. The Prince takes up all these in turn and deals with them in a most masterly way, his broad argument being that the cavalry were more usefully employed as they were, and that to raid in sufficient force would have weakened the division too much :—

“Without artillery a cavalry division cannot fight with sufficient energy, especially if it has to force defiles and villages, and guns cannot swim over rivers. Again, a cavalry division cannot be burdened with a ‘train’ of any length should it be cut off by itself for 8 to 14 days. In 1870 we found it necessary to attach to each division a provision column, and either half of one sanitary detachment or a field hospital. This we must also do in the future. Especially, should there be frequent engagements, we must consider beforehand the necessity of aid to the wounded. A cavalry division acting independently in a raid requires reserve gun ammunition, for the gun and waggon ammunition will not last for many serious engagements. Carbine ammunition must also be supplied from a reserve. This is specially requisite in a raid, when cavalry would have to fight on foot. All these considerations and requirements form impediments to cavalry which undertakes, ‘Pegasus-like,’ the duty of raiding. The letter concludes as follows :—

“I cannot agree with those people who maintain that our cavalry, in 1870-71, should have made raids with detached cavalry divisions, and, above all, have split up the enemy’s mobilisation. On the contrary, I maintain that in advocating such undertakings, people never thought of considering the results, and it was far better for us that we let them alone. But perhaps people will say that by such raids they did not expect the exploding of the heart of the enemy’s organisation, but minor undertakings, such as destruction of railway, lines of telegraph, magazines, &c. To do all this one does not employ masses of cavalry, but small bodies of cavalry, from an officer’s patrol to a squadron, which quickly disappearing render themselves invisible. We did lots of this sort of work in 1870. I need only remind you of the destruction of railway and telegraphic communication between Metz and

Nancy, before the battles round Metz, at the beginning of the war, and of the destruction of the Montmédy-Diedenhofen line soon after the latter battles."

[Tenth Letter.]

FUTURE RAIDS TO DESTROY MOBILISATION.

THE letter opens with remarks on the contrast between the character of the cavalry fighting in the raids of the American Civil War and that of 1870-71. The work of the American cavalry was facilitated by their finding friends among enemies, having their wounded looked after, information brought in and supplies furnished. The large wooded tracts of the country favoured concealed marching. Stuart's cavalry passed by Orleans (26th August, 1862) without being observed at all, owing to the dense wood. In France, in 1870-71, there were not many sympathisers with the Germans; the civil population often showed the bitterest animosity, *e. g.*, at Bazeilles, and in the numerous cases of Franc-Tireur cruelty to wounded. Thus, when one comes to consider the matter, raids on the "American pattern" in 1870 would have led to failure; no one should try and imitate them. Then there is the proposal of cavalry raiding over the frontier immediately on the declaration of war and swooping down on the enemy's country. A cavalry mass of one or two divisions is not strong enough for this. The cavalry must be in "imposing strength" and be pushed along several roads, at the most three, and follow out a distinct plan for the discomfiture of the enemy with a view to seriously affecting his fighting powers. The Prince then considers the subject as follows:—"We must leave out of the question that a Power with a mobile army could surprise another in its immobile state. Such a war can only arise from outrages of some kind or other giving rise to strained relations between the Governments, and causing the latter to resort to arms. Owing to compulsory service and plans for mobilisation framed after our German method now existing among all Powers, a partial preparatory arming is out of the question. We must accept that the first step in mobilisation will be for the whole

army. Such an act cannot be kept secret, and the enemy will, even should no declaration of war follow, on account of the quickness with which the telegraph makes all news known, order the mobilisation of his own forces. The difference in time at the beginning of preparation will not exceed 24 hours in the future, therefore we may take it for granted that the State which raids across the frontier gets a start of 24 hours on the enemy at the commencement of mobilisation. We can also assume that, should our cavalry get mobilisation orders, it will at the same time receive orders to start on its raids. We can also assume, taking a favourable view, that the cavalry will be able to leave their garrisons in the minimum number of days after the receipt of their orders, and that it will only require a very short space of time to unite the divisions, when half-way, for energetic action.

"In order to place reliance on all such 'time acceptances,' it is requisite to have at one's finger's-ends the mobilisation preparations of both countries concerned. Should one not be informed of the enemy one still can guess, from what leaks out, in how many days, from the order to mobilise, his cavalry will cross the frontier. With these suppositions let us start from the frontier of any European State on the map, and strike a direction having some object in view. Now, suppose that the cavalry will cover from 45 to 50 kilométres (30 miles) the first day, and measure off on the map what this will lead them to. Should the frontier be passed unchecked, we will either come on a river barring the advance which cannot be passed without further aid and appliances, because, as a rule, there will be a town close by with garrison troops on war footing, or else we will find ourselves in a 'rayon' of the mobilisation with men on leave being called in, &c., and which will rapidly develop itself, or we are landed at a barring fort (sperr fort), or even run against a large fortress. Such would be the case when the enemy, not being entirely mobilised or armed, would nevertheless be able to fight, and expecting invasion. We must take for granted that the telegraph has not been asleep, but has reported the

invasion. It is evident that a cavalry division can do nothing against a fortress. Should, however, the cavalry come on an open town its capture would be of no importance whether it contains a garrison, or is the Head-Quarters of a Landwehr district, or such like. Should such be the case, then one must reckon on having to deal with at least one battalion of 1,000 rifles. Can a cavalry division after such a forced march be able with certainty to overcome this resistance? It must at least keep one regiment mounted, and should it consist of six regiments, cannot put more than 1,400 carbines into use on foot. Are these 1,400 carbines certain of a speedy successful contest against 1,000 infantry rifles? Certainly not; and should the attack be driven off, will the cavalry let the affair develop into a serious fight, necessitating the employment of the last carbine? The game is not worth the candle, and I do not think such a proceeding would be rational. One would be rendering an entire cavalry division unserviceable for a long time for the sake of destroying the mobilisation of one battalion. Nothing would result but the awaiting for daybreak in the vicinity of the place; but by next day the telegraph and railway would have considerably altered the state of affairs to the advantage of the enemy. Next day the cavalry division must settle on another plan according to circumstances. What is it to do? Is it to penetrate between the enemy's garrisons, perhaps crossing a river by swimming, leaving its guns and wagons behind, to carry further uneasiness into the enemy's country? This object is attainable, but at what cost? The enemy, informed on all sides, in possession of telegraph lines and railways, will not fail to hinder the cavalry by well combined moves, and cut off its retreat at once. Its annihilation would be very probable. And what real harm can the division do? It can carry terror among the old wives of both sexes, can cut down single persons, and here and there 'bone' a rustic on his way to join the colours. It will not even come across many such people, for one does not pay attention to every peasant or question his journeying. Most of the men able to bear arms will get out of the way, and one cannot afford

a minute examining of the enemy's country. You will say we can destroy railroads and telegraph wires. Very right! but for this we want no cavalry masses. Bold and skilled patrols which march by night and hide by day, can do this just as well since the introduction of dynamite, if they are only from 4 to 12 strong.

"The total result would thus be that a few battalions would lose some men from their effective strength, and to do this surely a whole cavalry division should not be required. Thus the continuation of a raid longer than one day's forced marching forbids itself in all concrete cases, just as an isolated raid at the outbreak of hostilities appears to be impracticable everywhere away from home, when the frontier is formed by some barrier with few passages over it, like the Pyrenees, the Alps between France and Italy, the Danube between Bulgaria and Roumania, and the Channel between England and France.

"There would, therefore, appear to be nothing more for the cavalry mass, which has begun the first day of the raid, than to remain stationary in that part of the country they have on that day occupied, and push on from thence, observing patrols and feelers and small expeditions. Then the undertaking ceases to be a raid, and is nothing more than the throwing out of the cavalry divisions before the front of the army with the same object and intentions which one chief army command had in 1870-71. We then ask ourselves if it is necessary to thus push out cavalry in the first days of mobilisation in this manner into the enemy's land before we are in a position to follow with the army and support the cavalry. I do not think so; for, later on, the attack will follow over the same ground, and by *too early throwing forward* of the cavalry masses one reveals one's intentions, and, on the other, by attempting nothing serious, the cavalry masses will be ready for employment in other places where they will be more required. The summary of my observations is then this—that the employment of such raids to destroy the enemy's mobilisation is very little to be recommended, and it would appear to be more advisable to first mobilise one's own cavalry thoroughly, as laid down, before employing it on large expeditions,

at the same time disturbing the enemy by small attacks, and keeping on reconnoitring until the entire army is fit to begin decisive offensive movements : and then is the time to push on the cavalry masses in earnest, as happened in 1870, for they can rely on the support of the army coming up in rear.

“ A cavalry division cannot put more combatants into action on foot than an infantry battalion, and is always inferior to infantry in their arm and training in shooting. What further concerns the training of cavalry is the overcoming of obstacles, for instance, in bridging. We have recently read how Uhlans threw a bridge over the Oder with unprepared material and crossed on it ; but such material is not always to hand, and cavalry cannot afford time for complete training in pontooning and pioneer service, unless it neglects its cavalry training and develops into bad cavalry. In the course of training for cavalry the days and hours are all told off, and one should weigh well the consideration of breaking them up. Cavalry will never succeed in getting guns and wheeled transport over their bridges, and without these, as we said before, they cannot get on for any length of time.

“ The duty of cavalry at the beginning of war, and immediately after the declaration thereof, is, on the completion of their mobilisation, to push on in greater or less numbers in long reconnaissances into the enemy's country, not more than one to two days in advance, pushing on small ‘ feelers ; ’ and then work as they did in 1870, reconnoitring, protecting and concealing.”

[Eleventh Letter.]

ON THE DIFFICULTIES WITH WHICH CAVALRY HAS TO CONTEND.

PRINCE KRAFT writes on the subject :—“ Before General Von Wrangel gave the first impulse to the greater mobility of cavalry in 1843, the attack, including walk, trot and gallop, extended over a distance of 800 paces. Now-a-days cavalry must be able to cover one mile (German) at quick pace, trot and gallop, and then have strength enough left to deliver their attack and get through it. A march of 16 miles (English) in one day used to be a great

performance. Now they should be able to cover at least 28 miles for two to three days running. Instances there are of greater individual detachment performances :—The Guard Dragoons on June 30th, 1866, the 150 picked men of the 6th Thuringian Ulanen on 15th July, 1866, 94 kilometres (about 62 miles); Stuart's cavalry did about 50 miles in one day in 1862. Formerly cavalry patrols were thrown forward from one to two miles in advance of their picquets. Now we see officers' patrols covering 60 miles of country in one day's reconnoitring. Formerly it was a principle to employ small arm fire with cavalry as signals. There was an old proverb : 'The infantryman who is shot by a cavalryman must believe in destiny;' now we have a laid down system of fighting on foot. In the last war cavalry dismounted not only defended but captured villages."

The Prince then glances back at the exhibition a squadron made of itself, not 40 years ago, when inspected and ordered to go over the jumps, skirmish, &c., and compares the performances of those days with what is now done by cavalry. He tells us that on asking an old cavalry friend of his, who had a reputation for riding, what he would have said had he been asked, when a subaltern, to perform what is now demanded of a squadron, the latter replied :—"We would just have put him into a mad-house at once." Comments then follow on the great importance of training remounts, and the responsibility which lies on the squadron commander in this respect; at the same time the squadron chief has to instruct his men. He must not only make good soldiers of them, like the infantry company chief, but must instruct them in the use of their various weapons, in riding, shooting and fighting on foot. They do not want the training on foot of infantry, but must learn at least how to utilise ground on the defensive. There were times when only certain horses in the squadron would be employed to patrol, because the majority of the horses only went well in company and would not leave the ranks. Now every horse must be trained to leave the ranks at any time and go across country by itself :—"The Sisypheus-like work of a company chief is great; but that of a squadron chief is much greater."



Greater demands are made on the spirit and physical powers of a squadron chief after a long continued rapid advance, which, perhaps, renders him breathless, and while he and his horses are dripping with sweat, he has, when at the gallop, to keep his head clear and his eyes about him in view of the coming fight. He must keep his eyes on the enemy and on his squadron, give the right words of command at the right time, and make the right signals. There is no time to think almost, for often it is a case of a few seconds. Who is there who has not often experienced at manœuvres that his squadron, sent round to attack by a flank, somehow or other did not 'hit it off' in the desired manner, and how one was blown up for it afterwards? An error in judgment, perhaps caused by dust, either on the part of the enemy or one's own squadron, made one give the signal for wheeling when at the gallop from oblique echelon into line perhaps ten seconds too soon or too late, and one found oneself either in front of one's own attacking cavalry or separated from it by a big gap in the line. Then, when the attack is over, everyone sees the mistake, and some one who does not know the difficulty there is in leading, wrings his hands and finds it inconceivable that what is intended is not done in ninety-nine out of a hundred cases! The leading of a squadron will be very much affected by the love the chief has for his 'troop.' Many a company chief may be angry with me when I say that a good squadron chief is more bound up in his command than a good company chief. It is true nevertheless. It arises from the fact of his having had more trouble and labour in its training and formation, but it is the horses above all that he loves—a statement that may sound 'unmanly,' but I know that the feeling is in one's nature. Like the love of a mother for the child who has given her most trouble and anxiety, whom she loves best, and has perhaps nursed in great sickness, so is the love and care which the squadron chief bestows on his best horses in preference to his best men. The horses remain about ten, the men only three years in the squadron; the horses thus represent the 'trunk of the tree,' and when the chief speaks of his squadron, the horses are uppermost in his mind. And now let us imagine him after ten years' work leading his squadron

into the fire of the enemy. Anxiety for his own life does not interfere with his taking advantage of the right moment: but he thinks of his horses. He must avoid these being destroyed. Doubt creeps into his mind in spite of himself and robs him of his clear judgment. 'How will it be,' he says to himself, 'should this not be the right moment: and I gain more by demonstrations, by manœuvring or edging out of the fight, and by this means preserve this costly material for the army's good?' The hesitation and indecision which has been the cause of many a cavalry officer's failure at the right time may be attributed to these promptings, and not to the instinct of self-preservation, of which no German officer thinks when in action. The squadron chief must throw aside many, very many, of his cares when, on purely tactical considerations, he would seize the right moment for the attack. He must think, as did my departed friend Von B——when, having ordered his squadron to attack the enemy's flank, he cried out in a somewhat blasphemous manner:—'And now can God and the world blow their insides out to recall me! Down lances for attack; gallop, march—charge—hurrah!' (Und nanu kann mir Gott und die Welt den Hobel ansblasen, zur attakke Lanzen gefällt—galopp, marsch—marsch, marsch, hurrah!")

The difficulties which often present themselves to a squadron chief are, however, small in comparison to those with which the leader of a cavalry mass has often to deal. The mistake made by a squadron leader may possibly be in a great measure rectified, but once a mass of cavalry is committed it is hopeless to try and alter arrangements. The attack or movement must be left alone. The Prince then draws a picture of the dismay and grief of the leader who stands in such a pair of shoes, and contrasts thereto the much more easier task of the commander of an infantry division. The latter can much more easily rectify mistakes, even down to correcting wrong movements of individual companies. On the other hand, when the cavalry are in a tearing gallop (*bransender galopp*), the *leader of the mass* ceases to have any more power over it. In his remarks on this head

the Prince says :—"The commander of a large mass of cavalry must combine in his person so many essentially important qualifications that whoever is conscious of the fact cannot wonder that there are so few Seydlitzs. I do not argue from this that we must not count on having no striking co-operative results with cavalry, but we must be satisfied with a cavalry leader, if not perfect, at least being *in some measure* perfect in the duties of his arm. A cavalry leader is exposed to more danger than an infantry leader, apart from the difficulties of leading. I do not refer to personal danger, for this is no danger—to give up one's life for King and Fatherland on the field of honour is the greatest glory which can befall a leader—but I refer to danger to honour and reputation. An order misunderstood, a wrongly repeated trumpet call, may cause his utter ruin."

Talking of panics and how the best cavalry in the world may be rendered useless thereby, the Prince recommends us to read *Les Paniques*, by General Trochu, published 20 years ago, and remarks that the General must have himself experienced what a panic is like from his description thereof. Then follows a well-written descriptive scene from Trochu :—"He who has read Trochu's book will sympathise with the cavalry leader who has ridden ahead with the leading squadron which is told off to reconnoitre, while the main body follows through a wooded mountain defile. He has ordered up the battery of horse artillery at its quickest pace to the leading squadron, and it unlimbers on the bare hilltop close to the mouth of the defile. The shutting of the limber box lids echoes in the narrow valley among the following troopers like six infantry shots, and they believe they are under infantry fire in the close vicinity against which, in the narrow valley, they are powerless. In the meanwhile scouts have reported that the village ahead is unoccupied, and the battery, according to regulation, sounds 'cease firing.' This is several times re-echoed in the valley, and the troopers imagine it is the 'retire.' The belief in the danger above mentioned is strengthened by the renewed shutting of the limber boxes, which again sounds to be infantry fire, and when they hear the 'trot' sounded,

when the battery and squadron advance, they fall back at the trot and leave the dangerous defile behind. As soon as they reach the open, 'form squadrons' and 'gallop' are sounded. Some only hear the first and some only the second sound. Thus they are all started galloping, and the belief takes possession of them that this alone can save them; no call is heard, no officer can get up to the fugitives, for he cannot gallop faster than his well trained troop horses. So the mass rushes away for miles from the enemy who does not even exist. Such is a panic, and such quite possibly could be the cause. We can imagine the feelings of the commander of the whole better than describe them." The Prince then gives a shorter description of the case of a cavalry mass being out of the fight, losing its leader, &c., owing to taking a wrong order for direction and co-operation.

The letter concludes with advice to cavalry officers, more especially the junior ones on whom in war time the duty of leading patrols would fall. The movement of armies may be influenced by their reports, and it is thus of the greatest importance for them to study so as to know what to report and what not to report, separate the important from the unimportant, &c. In spite of the fatigue of riding, teaching his men, drilling them, &c., the young officer must study his profession. During the break in the training he should take long rides, and in winter go in for Kriegspiel. If he does all this, the Prince remarks:—"We will know then the price he has to pay in return for the proud position he occupies as an officer of the mounted branch—the price being never-ceasing work from morning till night year after year."

The Prince here remarks that many German cavalry officers, from constant work on horseback, &c., injure their health seriously and become "unfit before their time." In conclusion the Prince refers to the expense to which cavalry officers are necessarily submitted owing to their having to mount themselves on the *very best* horses they can obtain. He says there is hardly a single cavalry regiment in which an officer can live unless he has 2,000 marks a year of his own (£100). This sum will diminish as the officer attains higher rank, but notably when he

becomes a senior captain (Rittmeister I. Klasse). After this his expenses will, however, again increase. The Prince calculates that a cavalry officer during his service will have "laid down 40,000 marks (£2,000) for the Vaterland" out of his own pocket.

[Twelfth Letter.]

THE Prince, referring to the demands on cavalry in the future and how to obtain them, opens his letter by stating that we quite misunderstand him if we think that the difficulties which cavalry have to overcome, and the demands which he assigns to it in his eleventh letter, are too great. The demands he lays down generally in a few words:—(1) the squadron *must* be able to cover $4\frac{1}{2}$ English miles at the trot and gallop, and be then able to attack and pursue; (2) single selected horses must be able to cover from 80 to 100 kilometres (50 to 60 miles) in one day to carry out long patrol rides. The leaders of these (officers) patrols must be so thoroughly trained tactically that they may be able to report on the country and enemy in such a manner that will *guide the chief army commands in their orders*; (3) the larger cavalry masses must be able to cover long distances daily, to come to figures 45 to 50 kilometres for three days in succession (28-35 miles). These distances would diminish daily if kept up for a longer time than three days, and if, later on, a great exertion is required on one particular day, one complete day's rest must follow; (4) fitness for fighting (*Gefechtsfähigkeit*) must not suffer from these exertions neither in the squadron by itself nor in the cavalry division as a whole.

"These demands are not set too high. The cavalry *can* perform them, *has* performed them, and *shall* perform them if they are required to do so, and only if they have had the means of so doing afforded them."

In a former letter the Prince gave instances of long rides by officers in war time, and now says he could give many instances of officers at manœuvres being in the saddle upwards of 16 hours without rest or food for themselves or horses on reconnaissance,

and remained fresh and fit because they had a passion for the work (*Passion zursache*). There is great rivalry in the Prussian cavalry among the officers to obtain distinction as patrol leaders ; and the Prince has known the officers of some cavalry regiments before the manœuvres came off, being for several days at their own expense examining the country and so perfecting their reconnaissance duties that reports were sent in during the manœuvres of great value and accompanied by saddle sketches by all the non-commissioned officers and some of the troopers with the patrols.

"There is only one question which will never be answered in peace time, and that is—Can a cavalry division march 45 to 50 kilometres daily for three days in succession without suffering in fighting efficiency ? This is the only thing in which our cavalry has no exercise. To enable a large mass of cavalry to make these forced marches of three days' duration, and at the same time husband the horses' strength, requires exercise and routine. War is very different from peace ; countless matters arise necessitating looking after and attention, but by observing which the men and horses are spared and kept fit for greater exertion."

The period of three days is fixed on by the Prince as the time necessary for the cavalry to get sufficiently to the front ; allowing at the same time the infantry to begin their advance. The Prince then deals with the subject of rendezvous places.

Nothing is more tiresome and bad for troops than moving them here and there before the whole is united. What folly it is having squadron, regimental, brigade and division rendezvous ! And yet such often happens. It causes loss of much time which has to be robbed from the rest the men and horses would otherwise enjoy. What is wanted as a remedy is "practice and routine," short and concise orders which leave nothing forgotten or doubtful.

When the division begins its march, if it is a long one, say 50 kilometres, it is of the greatest importance that the horses are ridden quietly at a steady pace. Equally important are order

and keeping closed up. In keeping the required distances, much halting, closing up, collisions, &c., frequently occur. These are sometimes unavoidable. What is required is practice, and much practice is required for a large mass of cavalry to trot steadily and quietly without checks and stoppages. The squadrons must preserve an elastic distance from each other, that checks in the pace may not be passed on to the rear. Should the distance increase too much, then a connecting file should be thrown out. The apportioning of the pace must be regulated by the watch. On this head the Prince remarks:—"In 1866 I marched from Poysdroff, near Vienna, by Prague to Berlin with a fairly large mass of artillery, and so regulated the pace that we did half an hour's walk and then $2\frac{1}{4}$ miles trot, alternately, having begun the first few days' marching by walking for a quarter of an hour and trotting for a little over a mile. By this means I about covered the mile (German) in the hour. If the march happened to be longer than 18 miles, then I trotted for one whole mile (German) in the middle instead of for half a mile and then halted in rendezvous for half an hour. I thus did my 18 miles in four hours: men and horses remained fresh, and the horses were fed." The Prince then remarks that the squadrons should always mount and dismount independently before moving off or when halted, so as not to tire the horses by superfluous sitting in the saddle. The greatest mistake of all is to pass the order for the whole division to mount at the same time: 30 minutes would elapse before the last squadron moved off in order of march. From his experiences on the long march from Vienna to Berlin, he advocates a march of 50 kilometres (30 miles) being thus dealt with. Begin with half an hour's walk, then half a mile trot, half an hour's walk, trot for a mile, half an hour's walk, half a mile trot, then half an hour's walk with an interval of half an hour's rest half-way. This would cover 30 kilometres; then a rest of from two to three hours, in which the horses would be watered and fed, and the men's midday meal given. The remaining 20 kilometres would be done in three hours. The division would thus do 50 kilometres in 10 hours. The miles are German ones ($1=4\frac{1}{2}$ English and 11 kilometres=7 miles English, approximately).

The Prince advocates the formation of fighting lines, if possible, daily, from the line of march, presumably when at manœuvres either against a supposed or marked enemy. He remarks that he has never seen this done yet. The formation of the lines always took place from the rendezvous and never from the line of march. The latter plan is more difficult of execution, because more obstacles present themselves to the cavalry, and these increase should the divisions be marching on parallel roads. Undoubtedly it would be the case in war in 99 out of 100. It seldom happens that cavalry move to attack from rendezvous. The cavalry which can form its fighting lines quickest from the line of march must gain immense advantage, and yet it is seldom practiced.

General Von Radowitz was the first who advised that the cavalry should be practiced in long marches all over the country. He died in 1853, and his plan was never adopted. Lately the cavalry of the 12th Corps was so employed and gained very useful experience thereby, and the cost incurred by damage to crops was not one-third of the cost of hiring an exercise ground. In spite of this there has been no repetition of this practice. The French make their cavalry do it. The divisions march against each other from long distances, and after a few days meet in combat. Then follows a scheme of the Prince's own for cavalry manœuvres. The chief points to note in it are briefly as follows :—

(1). Two cavalry divisions of army operate against each other, and in three days from the commencement of manœuvring must reach a certain line of country.

(2). The first two days in each force to be devoted to operations based on certain statistical ideas, to take, if possible, the form of a march for the first day on parallel roads, including a joint action of the 2 columns against a supposed enemy at any point of the march.

(3). The second day the whole division to march united on one road, and during the march form the usual 3 lines and practice the attack.

(4). The third day the opposing divisions should meet on the march and manœuvre against each other.

(5). A day of rest on the following day.

(6). Two days' manœuvres devoted to attacks and pursuits, as deemed necessary.

(7). The seventh a day of rest, and next day the divisions begin to work back to where they started from. The divisions would thus, from start to finish, make 6 forced marches, have 2 days' exercise and 2 days' rest, in all 10 days' training. The chief in command could inspect the two divisions (12 regiments) during the first day's fighting. He would then be able to judge as to their respective merits after their 3 days' marching.

(8). The bulk of the 10 days is then given to marching; the actual manœuvring in action being simple, no time is unnecessarily wasted on it.

(9). As before, the Prince would have the 3 days' marching cover 40 to 50 kilometres daily, and calculates the horses, allowing three quarters of an hour margin, would be 9 hours under saddle daily, which is not too much for them. Ten hours' work a day will ruin no horse. Many peasants' horses do more all through the harvest. At any rate, it will not affect them so much as actual war will, or even as some manœuvres will when they are 12 to 16 hours at it without feeds, and, in all likelihood, standing still under their riders for long periods.

If possible, the Prince would have these 10 days fitting in with the infantry manœuvres to show the cavalry that they really exist only for the sake of the infantry.

[Thirteenth Letter.]

THE letter we now come to is devoted to the subject of remounts and recruits, and the Prince's remarks thereon are based on his experiences as a divisional commander of all three arms. In Germany the remounts reach their regiments in midsummer, July, instead of, as formerly, in the beginning of October, and are at once taken into training. Prior to this they did next to nothing

for one year, but were handed over to an under-officer in each squadron as four-year old, and only began training under an officer at the expiration of the year, during which they were supposed to have got accustomed to the weight of the rider and saddle. Many remounts turned out badly under the system. They had lost docility and objected to training, &c. The system now pursued is to hand the remounts over to the most experienced rider among the squadron officers, under the supervision of the squadron chief. The Prince remarks that the squadron will be deprived of the former officer's services at manœuvres, but the horse being the element of cavalry on which it depends for its efficiency, must have a good deal sacrificed for it. The remounts, according to the Prince, should, at the end of the year's training, be capable of the following :—" They should be able to trot well at medium and fast pace, circle to either hand in small and large circles, and change from the circle to the other rein. They should not be inconvenienced whatever by rider, bridle or leg, show no timidity, be quite steady at mounting and dismounting or when the rider leaps on them, leave the ranks and go by themselves, jump ordinary ditches and walls by themselves, and be perfect at bending. The greatest demand on an ordinary well-trained remount consists in his being able to start galloping from the trot when on the circle, and then contrive the gallop in a straight line. All this without damage to his paces or legs." Further training than this the Prince considers quite unnecessary and deleterious to the remount's legs. He would substitute long trots as being much more useful ; the distances to be gradually increased as the horses settle down to the work.

The recruits join their squadron in the beginning of November. As regards the training of the recruits in riding, the Prince says he has nothing to suggest as improvements on the existing system. But, on the other hand, he contends that at the outset a cavalry recruit should have quite as good a training on foot before he begins his mounted work as an infantryman before he goes on to the higher part of his work. Some men join who are more like wild animals, and must first be " made men of."

The Prince then remarks :—"I have always wondered why the cavalry instructors, who show such wonderful patience with horses, teaching them gradually how to use their legs, paces, jumps and so forth, on the other hand show no patience at all with men, and expect peasants, labourers, shoemakers and such like to be able to begin with marching on the first day like trained men. The reply always is that cavalry have not the time to waste with the men. In reality it is time gained, being a means to the end." The Prince, at the same time that he insists on a good grounding of the recruits, would limit the foot drill of a cavalryman to the extent of his being able to march to church or on an ordinary parade in line sections or half troops and perform the necessary formations from the above.

Another branch of a recruit's training is theoretical instructions. The Prince condemns a lot of this as useless rubbish which only bothers men. He instances the luckless recruits being bored to death by having things he does not, and never will, understand drummed into him like a machine, and remarks :—"I agree entirely with a soldier whom I once heard asked, 'What is theoretical instruction? when he answered, 'an instruction that is not practical.'" In only exceptional cases did the Prince come across really useful instruction, and that was in the case of some regiments in which the recruits were taken round a part of the town hard by, and shown what patrolling was. This they soon picked up, and such men turned out smarter troopers afterwards, simply because the means taken to instruct them kept up their interest.

During February the commander of the regiment holds the "inspection on the snaffle." The Prince does not set much store by this; the horses, like our own, are ridden on the bit, the snaffle being only a "means to the end." The time for this inspection should be before the horses are bitted.

The letter closes with remarks on the winter riding drill instruction and the classification of the men. Formerly the Prussian cavalry were divided into recruits and first and second class

trained men, but lately into recruits (1st class) and trained soldiers in one class (2nd class.) This simplifies the work a good deal. A soldier who does not show sufficient ability in his first year's service is sent back among the recruits.

[Fourteenth Letter.]

THIS letter opens with remarks on the time of year at which the inspection of the squadrons was held. Formerly the guard cavalry were inspected in the middle of May, and had consequently to begin their exercise in April, leaving only three weeks in which to do it. In 1860 the inspection was fixed for all cavalry for the middle of June. Horses and men had thus more time in which to be prepared. The Prussian cavalry thus had six weeks in which to get ready for inspection, after which the Prince was in the habit of beginning instruction in field service and shooting at the end of June. His scheme was as follows :—The squadron went to drill three or four times a week. On the way to and from the drill field, each party had to march in "war formation" with advanced party flankers, &c., which did the young soldiers much good. "Field service" was practised once a week in light marching order. Shooting was held once or twice during the week, the horses carrying their riders at a walk to the butts.

The squadron when inspected goes through a great deal—elementary drill, riding by signal, the rudiments of field service, riding in the school, single-stick mounted, and in training the horses and remounts. The inspection of a squadron sometimes lasts five hours. When two squadrons are inspected together it lasts six or seven. The Prince maintains that the horses having been well trained and in wind, should go through all this and not be fatigued in the least.

The best way of sparing the horses at an inspection is never to let them wait formed up on parade for long periods. Nothing "takes it out" of horses more than this. "Should now a commanding officer be obliged to wait with his men, from some unavoidable cause, it may happen that a squadron which would

sooner be quarter of an hour too early than half a minute too late, has to wait for half an hour 'on parade.' The result is that there is a great absorption of the power of the horses; many horses from weariness become uneasy and restless, do not go up to their bits, and dressing becomes hopeless. The squadron leader after giving the salute is as astonished at the appearance of his squadron as the inspecting officer. I have known one of the smartest cavalry officers get a tremendous wiggling because his squadron in marching past, after a long wait on parade, did not dress perfectly and the horses were restless and unsteady. The way to see a squadron on its proper merits is to order it to remain saddled up in its stables, go there and order it to file out, and then watch it filing out and forming up. One thus sees the 'interior work' of the squadron. The squadron being now drawn up, one can see the fitting of the appointments and kit, and form a pretty good idea of their cleanliness. Then order the squadron to march to the drill field on some simple tactical idea, thus killing two birds with one stone. The squadron trots out there and attacks an imaginary or marked enemy. If two squadrons are being inspected, one can fall back on quarters, the other can pursue and a collision can be arranged."

Then follows some remarks on "riding by signal" or signal drill:—"Paragraph 110 of the 1876 drill book (now superseded by the 1887 book), lays down all concerning the above. Before the 1876 book appeared, a certain squadron leader not only instructed his men to move, halt and change direction by signal, but also to break into column, oblique échelon, to resume the original direction, to change front and direction, and also to change the pace and go to that which they themselves went. The other squadron leaders in the division soon followed suit, and the brigadier then selected the plan of that squadron-leader which he thought the best, and ordered all the rest to conform thereto."

The Prince then goes on to say that he was much struck by seeing a squadron so led, and observes that such leading cannot fail to facilitate surprising the enemy or getting on his flank or rear at the same time. Although the system is hardly applicable

to a large body of cavalry, it serves as a means to the end of simplifying the leading. The custom of watching the signs made by the sword made the men more attentive to their officers and the officers to the leader. The silence of the squadron leader led to absolute silence in the ranks, and, in short, the drill by sword-signal was better, steadier and more promotive of discipline than that by word of command.

The next point in the letter is that of a squadron directing on a given object. "Concerning this," says the Prince, "when I had just obtained a division command, I experienced very markedly that from want of practice in riding on given objects the squadrons found great difficulty in hitting the object of attack. When I ordered the squadron leaders to arrive with the centre of the squadrons at any point I chose to place myself at, hardly one succeeded in so doing. Most of the squadrons shot past me. More difficult still was it for them when I moved *at a walk* and ordered them to direct on me as before. The directing flank was then the right. Since then, God be praised, the dressing has been changed too by the centre; and the officer of the centre section giving the direction, the men have only got to follow him which simplifies matters, but nevertheless practice must be kept up, and especially at moving objects. The great point is that the squadron attacks the point against which it is sent. What is the good of all the instruction in the world if we attack our own side instead of the enemy? Before I had cavalry in my command, I have often heard the leader blamed for not attacking as directed; but no one even showed the luckless ones how it was to be done, and they never got the chance to learn. Even with dressing by the centre, much practice is necessary when one comes to consider how the attack direction must change in the quick phases of a cavalry combat. When the directing officer rides at full attack speed he may have to change direction, and this leads to a crowding in one flank and a tailing off on the other in a loose swarm. Therefore he should slack off when he makes his curve to enable the squadron to conform and ride to the attack closed up. If this is not done, the attack will invariably be delivered in loose order. Yes; those loose attacks! How much has been

written and jabbered that the attacks are made too loose and should only be delivered boot to boot. But, my honored comrades of all arms, all writing and talking is useless if one only blames and scolds and does not inquire into the cause and explain *why* the attacks are loose and how this is to be avoided. The drill book tells us how the attack is to be made on the drill field. We must now practice it against a moving object; but that, too, is not sufficient. It may happen that a corps which has overcome all the difficulties which lie in the way of making its attacks closed up, and has constantly practiced at moving objects at manœuvres, falls into confusion and is *en débandade* instead of *en muraille* at the hoped for time. Then it gets much blamed, criticised and reprimanded: its mistake is 'beyond belief,' 'unprecedented;' but no one tells the much-to-be-pitied leader where, when and how the mistake arose. The result is easy to foretell—the corps is called 'swarm,' 'horde,' or 'band;' but who was to blame? How was this to be avoided in future? These questions I have never heard answered, and yet, in spite of all this, the reason was so manifest, the mistake at the outset so pardonable, that a friendly admonition or simple remark would have done more good than the hottest wiggling. During manœuvres or in war time, a cavalry attack which is, as on parade, straight in its course throughout, seldom occurs. Most attacks are the immediate outcome of flank movements, either after the wheel of the squadron, or after the wheel of sections into line, followed at once by the charge. Most squadron-leaders, full of energy and thirsting for action, their eyes rivetted on the enemy, give the command to charge with their sabres raised, almost before the command to wheel or wheel into line is out of their mouths, and never look round to see whether or not the movement is complete. If it is completed, then the wheeling flank has not a chance, the attack must be a loose one, tail out and be delivered *en débandade*, the pivot flank getting the start of, and racing away from, the rest. This mistake will occur often, or in the case of fire-eating, keen squadron-leaders—for they are mad to get at the enemy and go 'like blazes' before their men; but let me tell them that by such undue haste they render the result of all their care and zeal

very questionable, and that they must look around at their squadron before giving the word to charge. He who knows the root of the evil will perceive then that it can be more easily checked by a well meant 'talking to' than by storming and raving, for it arises from excess of zeal and activity, and not from neglect or idleness."

The letter concludes with some very sound remarks on squadron riding-school drill. The Prince relates how he asked once why such a fuss was made whenever there was a check in the ride, and was told that in war time it would be useful should the horses have to pass through a narrow defile, and that the exact distances, &c., which the riding school insisted on, was a good preparation for the above. He then observes that the amount of time wasted absolutely in the riding-school might be far better spent in accustoming the horses to long steady trots with small front. Another point he never could understand—*why* the smallest mistakes in a riding-school in position, pace, distance, &c., should call forth such storms in a tea cup as they do. And do the men really benefit by it all after they are once dismissed, and are supposed to be efficient and smart cavalry soldiers?

[Fifteenth Letter.]

SINCE the last big wars minor tactical training and exercises and officer's distance rides have occupied a much more prominent position. The Prince tells us how in the old days small tactical operations were always based on some grandiloquent general idea: for instance, "Berlin is not supposed to exist: Under-Officer Adam take your patrol on to the Branhausberg, &c., &c." Such a state of things only led to confusion, and the result generally was a failure. The Prince's idea is that in every general idea for manœuvres the situation must be taken as it is. Such practices as making fields represent lakes, marshes, &c., and supposing the enemy to be unable to "get here or there," are reprehensible. Many a young officer has been utterly bewildered at finding himself in such "war situations." "In war one

has none of this sort of thing." Why then practice it in peace? One of the Prince's cavalry regimental commanders, impressed with this evil, devised the following remedy which so pleased the former that he made it a regulation for his division:—"In the early part of the year he drew up a 'war situation' which affected the four garrison towns of his regiment and involved three or four days' manœuvring. On the above supposition, after the inspections were over, he took his officers with him for three or four days' service ride. When he arrived at the several garrisons he took the non-commissioned officers with him from them. He thus formed the groundwork for all the year's manœuvres, and every field day had to be based on this general idea and included in its 'frame.' No new general idea was ever promulgated, and much trouble was saved. The main advantage was that every officer and non-commissioned officer, just as in war time, never forgot that the conditions remained the same in all the field exercises, and had to think out how he should act according as the exercise occurred in *different parts* of the *théâtre de guerre* In my experience I never came across any cavalry regiment so well up in field work as this one."

Squadrons when marching to or from drill had always to march in war formation. When the squadrons were concentrating for regimental drill no village was passed without being examined, &c., &c., and reports sent back.

Passing on to the "patrol service" and "security service," the Prince says that, according to his idea, these two are never sufficiently clearly separated from each other; and granting that in a certain measure they join hands, they should be each undertaken by different bodies, and not performed by the same:—"We observe this more pointedly on the march by day. A squadron or half-squadron which is pushed on ahead as the advanced party of a corps with the usual precautions, has done as good as nothing towards reconnoitring for the enemy, for the vanguard and side-flankers cannot go farther off than will prevent their alarm shots being heard. All

reports from there will arrive too late, as a rule, for a determined enemy will be on their heels before measures can be taken Officers' patrols must be thrown out several miles ahead. The security party comes at its regulation distance from the main body behind, and its conduct is guided by it, while the patrol service party guides its action by the enemy. At manœuvres, as a rule, when a squadron was ordered to find out information about the enemy, it formed itself beautifully at the gallop into the drill book order (page 206), with correct distances, but did nothing more; they never dreamt of sending a smart patrolling party with a quarter of an hour's start ahead." These remarks all apply of course only to minor operations.

Coming now to the subject of officers' patrols, the Prince tells us that lately complaints were made that too many were used, and the practice became misused. "I would have been greatly rejoiced," he says, "had I heard of this misuse long ago. Manœuvres are for the instruction of all, and the more opportunity cavalry officers get during them to patrol and bring or send information the better. Of course we have not enough officers in war time to spare, and cannot send out one-third of the number of patrols as at manœuvres; but then we cannot do everything as it actually happens in war; and the expense of the few days available necessitates incongruities we cannot avoid. All I can say is that at many manœuvres I have seen three pitched battles fought daily, ay, and three days' running: if we had wanted to manœuvre more like the real thing we might perhaps have had one battle in the whole period, and very likely none at all; and the small amount of instruction one would get out of this sort of thing is not worth the cost incurred."

A few remarks then follow, giving instances of important patrol work done in 1866 and 1870-71. The necessity of separating the two services is no new-born idea:—"We read this in the criticism of a General of high rank in a neighbouring army on the manœuvres of his troops. Verdy du Vernois also insists on

it in his 'Cavalry Division,' the exception here being that an advanced cavalry division is essentially a big 'patrol service,' which nevertheless must push out its patrols miles ahead of its outposts." If the two services are mixed both must suffer. The Prince concludes his letter with the following remarks:—"I cannot help remarking, in conclusion, although it may sound paradoxical, that it has been my experience in peace and war that a single officer's patrol in *nearly all cases* sees more and reconnoitres better than a whole squadron or a strong cavalry party. A squadron is more conspicuous at a distance, and is more difficult to conceal than a small patrol which a few bushes hide and which can slip about unseen. There is always the inducement to fight when a squadron is employed, thus the object is lost sight of, and the energy wasted on the wrong tack. It is all very well to say they should not do so, but they *do* do it; and when this is the case, they can do nothing otherwise than run the chance of compromising their honour. On the other hand, an officer with a few men will not dream of fighting. I recollect once at manœuvres of a squadron and an officer's patrol being sent out from opposite sides to reconnoitre the flanks, the squadron drew artillery fire on itself, and had to retire without gaining any information of the enemy's infantry; the patrol slipped through hollows and bushes past this very squadron, unperceived by it, and sent back a full report on the whole position. True, the squadron could have driven back the officer's patrol; but when a squadron is sent out the chances are it does not descend to such 'littlenesses' when it is told to 'boss the whole show,' and should it attack the patrol, I think the officer is justified in showing it a clean pair of heels. I cannot, however, categorically assert that an officer's patrol sees more than an entire squadron on all occasions, but only in most cases. It is, however, imperative in war to economise one's strength, and not employ more force or engage more men than is necessary for the end in view. At any rate, one should always ask oneself, before employing a squadron, whether or not an officer's patrol would do just as well or better even."

[Sixteenth Letter.]

THE EXERCISE OF LARGE BODIES.

THE advances made in the system of leading a cavalry regiment since the war of 1870 are due to the Drill Regulations of 1876, (since modified by the 1887 book), and to the exertions of General Von Schmidt, who unfortunately died a few years since. The abolition of dressing by the right and pedantically adhering to the squadrons always keeping their numerical order in line, has greatly simplified the leading.

The first two points on which the Prince comments are—(1) flanking movements and (2) the second line. A regiment can either attack in line on the enemy's front or else it sends one squadron against his flank, should it attack cavalry in one line. "I have noticed," he says, "many artifices employed by this flank squadron, and I doubt very much if they would succeed against a really determined foe to any great extent." Great stress was laid on the importance of this flanking squadron arriving on the enemy's flank simultaneously with that of the rest of the regiment on his front. To obtain this an artifice was necessary which would be impracticable in real warfare. The squadron must either start galloping when the regiment is at the trot, having more ground to cover, or else the regiment must begin the gallop after the squadron does. This led invariably to such confusion that the Prince says he has hardly ever seen the attacks hit off (*klappen*), and asks how it could succeed in war? A well-handled hostile cavalry could meet and defeat this flank attack and also fall on the remainder afterwards. "Thus it is manifest that the time for attacking the enemy's flank is immediately after the two lines meet, and not simultaneously with the collision. The two lines meet, smash into each other, and then for a few minutes there is the devil's own row, cutting and thrusting, ringings of sword blades, yells, heavings here and there and—cursing. Old soldiers have told me when I was yet a young officer, that out of twelve cavalry fights, eleven were without collision. One of the two opposing cavalries always wheeled about, and the other, after a little, rode into it from

behind. This I have never seen in war. I never witnessed an attack, to the honour of our enemies be it said, which was not accepted by the foe. The collision always occurred, and thereafter the confusion and cutting through. The scale of victory then inclined to that side which had kept a closed up body in hand, or which brought up closed bodies on the flanks, and, as a rule, this occurred from one to two minutes after the shock of meeting. Those hand-to-hand fights I myself have witnessed lasted less than one or two minutes: after that five or ten minutes settled the affair. The troopers had partly ridden through each other, partly were locked together, so that some of them were fighting at the halt. After a little while single men from either side came out of the *mêlée*, falling back. When the line had closed up more their enemies followed them, and the side from which, as a whole, more came away than were followed, was the defeated one. Closed up troops must then exercise great moral and physical influence in such a case, especially if they rode up quickly from a flank and thus cut off more of the enemy than they cut down. Whoever has seen all this cannot doubt that a flank attack must be more effective when delivered one to two minutes after the shock than simultaneously with it. What a long time is one to two minutes for galloping cavalry! I mean by this that the result of the attack of the flanking squadrons must be much more effective than if it had accompanied the main attack till the charge were ordered. The enemy having also ordered the charge, the flanking squadron has time to make its wheel on the hostile flank, as the enemy's attention is distracted."

Going on to the attack of a brigade, the Prince says that the general complaint always was that the second line arrived too late from not riding fast enough. Supposing a brigade to form the second line or even a regiment. He advocates, as being an easier plan, to make a common attack with the two lines, sending the first at the enemy's flank and the second straight at his front. General Von Schmidt advocated this plan, too, of getting one line to attack the flank. One must not expect to surprise

the enemy by this, for he will perceive the movement of the first line more easily and before that of the second. The Prince states that he has always seen the enemy surprised by the second line, of which the advance was masked by the dust left by the incline of the first to a flank, causing him to opine that the whole attack is on his flank, and consequently inclining or wheeling to meet it. Now is the time for the first line to front to the enemy and charge, while the second keeps straight on and falls on the hostile flank or rear. The result of such a charge cannot be doubtful, but it requires excellently disciplined cavalry to do it. If the cavalry is not up to this standard it will lose more from want of "boot to boot riding" and *élan* in the shock than it gains by its skilful manœuvring.

"But," adds the Prince, "there are other dodges which have also succeeded. When old Blücher was a Colonel of Hussars, he once wheeled about his regiment by sections and drew the pursuit of the French cuirassiers : as soon as he saw the latter in confusion he gave 'troops right about' and attacked them. General Von Hymmen did much the same at Blumenau with a squadron. Having wheeled about he made each half-squadron diverge, and, having drawn the pursuing Austrians in between them, he gave 'front—charge,' and caught them on both flanks." Cavalrymen call this in their jargon *die klappe machen*. Newly formed cavalry (e.g., Landwehr cavalry) or cavalry which has suffered loss in its best men and horses during a campaign, will be difficult to handle in this sort of work. It requires the very best material, discipline and reliance.

Many complaints were made that the distance of 300 paces (262 yards English) between the first and second lines was too great, and that the second line could not come up in time; but the Prince is of opinion that 300 paces is not enough distance. During peace, with the distance of 300 paces, great difficulty is often experienced in so handling the lines that the attack is hit off. Much more time is lost in peace than in war by circumstances which occur and bring disorder, especially in the event of no "marked enemy" being employed. The division commander must first inform the

line leaders whether the attack is to succeed or not; whether they are to attack a flank, cover a flank, &c., &c. In peace the division leader is with the second line; in war with the third line, which is the only reserve he keeps in hand, but which he loses should he go on in the *mêlée*. In war the second line must act as ordered, whether it shall prolong to the right or left, and everything else must be done by the line leader, who acts according to the enemy's movements and circumstances. When the attack is ordered the division leader has nothing more to do with the first and second lines: they are beyond his grasp. In war it is advantageous if the second line takes the enemy in flank one to two minutes after the collision of the first line: thus 200 paces more distance, which can be passed over in half a minute, is not out of the way, "but in peace one likes to see a flank attack made to a second." Following up his argument, we find the general tenor of it is that, although 300 paces is laid down as the distance which is to be rigidly adhered to till the attack of the first line, it were better if this distance were made elastic.

The Prince then goes on to say:—"After all, it would appear as if the leading of a cavalry division in war were easier than in peace. In a certain sense this is true; at any rate it is simpler, for in war everything is simple, but that 'simple' is ever difficult. The difficulty in war does not lie in intricacy of the evolutions and in the crowd of orders that pour in, but in the very grave weight of responsibility that falls on the division leader, in that he orders the whole to attack at the right moment, for 'too soon' or 'too late' may increase the sacrifice and turn success into failure. Thus it appears that the second line will in war time have less difficulties to overcome to cut in at the proper time, for during the *mêlée* of the first line it gains a few minutes, in which, if necessary, it can cover 1,000 paces at the gallop. The difficulty for the leader of the second line is the quick grasping of the situation and which of the five duties of the second line is to be employed—outflanking, covering a flank, taking up the attack, disengaging or prolonging. Imagine the second line leader

in a good swinging gallop. Dust, perhaps rain, blinding his eyes, perhaps a bit blown from a long advance and gallop: his horse, too, may stumble and probably is far from fresh. He arrives on a rising ground, sees the enemy coming on at the gallop, has to make up his mind and give orders; his line is only 300 paces behind, and will be up to him in less than half a minute. There is then not much time left to give orders. Do you not think then that 300 paces, instead of being too great a distance, is too small?"

The letter concludes thus:—"What qualities must a cavalry commander possess (be he commander of a regiment, brigade or division) in order to be thoroughly well up in his work? He must be first of all a good rider across-country and at the sametime be as hard as nails and inured to fatigue and long periods in the saddle. He must have the eye of an eagle, for he has no time to use a glass, and spectacles become useless when dimmed by rain or dust. He must be a man of quick resolve and firm will, for he has no time in which to 'ponder' or in which to change orders once given. All these are qualifications his position demands over and above what is demanded from all officers of all arms. Picture to yourself a cavalry leader with all these qualifications, and don't be too severe on him in your criticisms should he at any time make a mistake."

[Seventeenth Letter.]

THIS letter is not of special interest to an English reader as it treats entirely of matters connected with German cavalry divisions, which are localised and organised on different bases from our cavalry. Two points of importance may be noted. One is the necessity of cavalry regiments working together in division; and the other, the advantage of having the peace organisation as closely resembling the war organisation as possible, in order that there may be as little delay as possible on mobilisation. The Prince goes into the question of grouping the cavalry regiments in divisions in peace from several points of view, but sums up that the result would be bad on the whole, would lead to

complications, tendency to isolation from the other arms, and also he doubts if there are sufficient officers to command the division so formed and furnish the necessary staffs, inspection, &c. The letter concludes with a few remarks on heavy and light cavalry. The Prince ridicules the idea of having heavy, light and medium cavalry and enlisting men of different height, chest measurement, &c., therefor. Heavy men cannot be mounted on light horses. Heavy men on heavy horses give heavy cavalry; light men on light horses give light cavalry. The Huns had no heavy cavalry, and Germany in the middle ages had no light cavalry. The lighter the men the better for the horses. One cannot help agreeing with the Prince when we regard an Indian sowar compared with an English "heavy."

[Eighteenth Letter.]

SHOULD the cavalry on both sides be properly handled, in nine cases out of ten we will find cavalry fighting cavalry, and this naturally leads to the tendency there is for cavalry to practise attacks against cavalry, and to "base its work on cavalry lines." It would be a mistake, however, were cavalry only to exercise in "divisions" by itself. The defeat of the hostile cavalry is only a means to the end, and only after this does the direct work towards that end begin, and this consists in the employment of infantry which the cavalry must support. On this account therefore cavalry should be acquainted with characteristics, capabilities and requirements of infantry, and should be exercised with it in close fellowship. The same remarks apply to the infantry's knowledge about cavalry. Should the two arms thus get to "know each other," incalculable benefit must result to both in war time. The Prince here instances how an infantry officer once ordered some Uhlans to get off their horses and lie down to get cover from infantry fire. He then advocates the whole cavalry in the army being annually worked with infantry when all three arms are together; and deplores that those cavalry regiments which are worked in division are not allowed to be worked with infantry as well. He goes on to say:—

"This will give the cavalry opportunities of attacking infantry and artillery at manœuvres, and tend to dispel the effect which the distant fire of these arms is said to have on cavalry as soon as it appears in sight, which possibly leads to the cavalry shunning the fire zone entirely. As troops learn during peace so they will act in war; at least at the commencement thereof; and no one can deny the important effect which the result of the first battle exercises. What would be the effect of ordering artillery to retire as soon as it found itself in infantry fire? For the first time during the last war the cavalry succeeded in entirely acquitting itself from this stigma."

The Prince then observes that at manœuvres, umpires, as a rule, always decide against cavalry when it attacks infantry. If this continually occurs, the cavalry loses heart when it finds itself standing idle, doing nothing, away from its infantry, till perhaps it has a fight with some equally luckless hostile cavalry:—"Should cavalry be thus put out of action after it has executed a bold and well-riden attack, over hedges and ditches perhaps, because it was opposed to intact infantry—and, by the way, infantry is always intact at manœuvres—we cannot wonder at the leader getting discouraged entirely when he finds himself thus let in over infantry and made a laughing stock of, and the honour of his troop wounded. Being put out of action is much more 'honour affecting' for cavalry than infantry, because cavalry must dismount as a sign of defeat, and this the men look on as a punishment. On the other hand, the umpire is on the horns of a dilemma. If he decides in favour of the cavalry, he must then declare the infantry destroyed; should it have awaited the cavalry attack quietly and then been defeated, it may lead to a dread of cavalry being instilled. This might in war have a bad after-effect."

The Prince then remarks on the important duties of umpires at manœuvres—duties generally under-estimated and often entrusted to officers of no war experience. There can be no doubt that this is not the place for such men. The decisions they give may greatly affect the spirit and tone of the contending troops. War experience is here useful in assigning losses, &c.,

&c. Officers who have not seen war can learn somewhat of it at manœuvres : those who have, can be spared as umpires.

The next paragraph is devoted to the putting of troops out of action, a practice at manœuvres which the Prince observes is far too much indulged in, and which invariably in the end leads to discontent, loss of interest and shunning action to avoid the chance of being put out of it. A regiment of infantry which has already suffered severe loss from artillery fire is nevertheless supposed to be unshaken in moral should it present a steady appearance to cavalry which then charges the remainder. This cavalry attack should undoubtedly succeed. How often does it in the eyes of the umpires ? The Prince concludes his ideas on this subject by remarking :—"I have always experienced that manœuvres were much more instructive, and that the troops, no matter how severe their exertions, took much more interest in them, when it was the exception to the rule to put them out of action, and used only as a punishment for indolence and want of care and attention. For instance, when dismounted cavalry let themselves be attacked by infantry, or artillery or infantry when on the march let themselves be surprised by cavalry without opening fire." Of course there is no objection to losses being accounted for by so many men being deducted.

It is advantageous that infantry should be, if possible, worked not only with the cavalry attached to the division, but also with a mass of cavalry. They learn how such a mass moves, what it looks like, and the space it covers—all of which knowledge will be useful as teaching one in what time one may expect the cavalry to arrive at such and such a point. The appearance of masses of cavalry will also enable the infantry to judge of the appearance at a distance of hostile masses. The letter closes with remarks on the great utility to infantry of a few cavalry scouts to reconnoitre ahead and carry information. In the attack on the village of Le Bourget cavalry scouts reconnoitred in front and brought information as to what points were occupied, riding boldly through the enemy's fire, and by their reports enabling the artillery and infantry to combine their fire with the best results.

[Nineteenth Letter.]

DISMOUNTED CAVALRY FIGHTING.

THE letter opens with the remark that the above is a point relative to cavalry on which the Prince has not yet touched, but which has been much discussed by cavalymen, has called forth the most varied opinions, and on which he himself has been pretty much in the dark.

From the fact of cavalry capturing a few villages in 1870, defended by mobiles or *franc-tireurs*, the idea gained ground, in fact was put forward almost as a principle, that a great deal was to be expected from the sphere of cavalry activity. "We must be independent, and make ourselves free from dependency on the infantry," was the argument of some cavalry officers who the Prince says he could name. They went to the extent of bridging exercise to be "free from pontoon troops." The finishing stroke was administered to the Prince when a proposed drill regulation for cavalry in infantry tactics and field training was shown him. "Thank God it never became regulation," he exclaims: "one of our neighbouring States (France) has not only made its dragoons into mounted infantry, but actually turned the bulk of their cavalry into such dragoons. At one of my inspections I found squadron chiefs who, following the stream, had been working hard at a system of dismounted drill like the infantry. When part of the squadron dismounted for this drill, while the other part remained mounted as reserve (?) according to regulation, I saw an imposing line of skirmishing hussars, followed by a support, advancing in splendid style by rushes of half the firing line, while the other half blazed away. It was a stirring sight! Half the squadron hardly furnished 30 carbines, from which ten were in the support, leaving each 'rush' to be executed by ten hussars. 'Result' from such an attack was not to be dreamt of, unless failure."

On the other side of the question, nearly all the old cavalry officers laughed at this "foot business," and put it down as "unworthy of cavalry and tending to weaken the true cavalry

spirit—the rider and his horse and sword must not part company.” The Prince thinks that there is a great deal in what those old boys cry, and that it is not all prejudice. The cavalry are armed with a long range carbine, but there is nothing laid down in the regulations as to when they are to pass from mounted to dismounted work, for the very good reason that there is “nothing to go on” for laying down such a scheme, and a free field is consequently left with a few very sketchy remarks on attack and defence.

Then follows a “strength calculation” for such fighting. A squadron in war will seldom muster more than 60 files—very often far less than that. Taking 60 files, however, and supposing every third man as horse-holder, we will have 80 carbines for fighting. If we now assume the division to be six regiments or 24 squadrons strong, we will have 18 squadrons for fighting—that is, leaving one regiment entirely mounted and 25 squadrons of another for patrol service, &c. This will give 1,440 carbines on foot. No carbine shoots so well or carries so far as an infantry rifle, and the cavalry cannot get the same instruction as infantry. We can thus certainly maintain that a weak battalion of from 700 to 800 men is superior in its fire effect to the dismounted carbine fire of a whole cavalry division. The Prince then draws an amusing picture of what is to happen when the attack comes to close quarters:—“The cavalryman must either throw away his carbine, or use it as a club, or else draw his sword and keep his carbine in his hand as well: he has no bayonet to fix; in short, he is ‘in a hat all round.’” Again, it is impossible to count on more than 20 cartridges per man. On this point Prince Kraft says:—“True, the drill book states care must be taken that ammunition is properly supplied, but as to ‘how’ it is to be done the drill book is silent: could the carts follow a shooting line under fire? Does not the supply of ammunition to infantry in the fighting line belong to one of the unsolved problems? Is it not with artillery only possible under great difficulties as a rule? An infantryman has 80 cartridges with him, and they are used sparingly at the outset of the attack in order not to be short of

them at the decisive moment. How soon would the 20 rounds of the cavalry be cracked off? Can we load the cavalry with more cartridges? Certainly not. Where are they to be carried? If we take all these points into consideration, we will find the gilt still more rubbed off the cavalry-infantry man's attack, and I am not overstepping the mark when I say that I would back 500 good infantry to resist with success the attack of the dismounted men of an entire cavalry division."

Should a cavalry division have to overcome the resistance of a battalion, the Prince advises it to make use of the true cavalry element—the speed of the horses; and take the position in rear while the artillery shells it in front. Turning to the defensive, the Prince remarks that dismounted cavalry can here play a much better *rôle* than on the offensive. For instance, in holding ground, &c., which commands the exit from a defile, the passage of a bridge, and such like, cavalry by its fire can cause the enemy to deploy and reconnoitre, and thus gain time for its own side. The enemy will not at first know for certain whether they have cavalry or infantry to deal with. Again, when the enemy has made his attack dispositions, the cavalry can mount and retire, or even the enemy may draw off. At Forbach, on August 6th, 1870, Lieutenant-Colonel Dulace with two squadrons of French cavalry delayed the advance of the 13th Prussian Division on the Kaninchenberg. The Prussian Guard Dragoons by their fire caused the withdrawal of the French infantry that was sent to seize the railway defile at Dieulouard. Should the cavalry be accompanied by horse artillery the deception becomes still more perfect. We cannot expect or demand any more than the above from the fight of cavalry on foot.

A few remarks then follow on the useless waste of time which training cavalry to fight on foot would incur. Another point in support of his argument, and on which the Prince lays stress, is the danger arising from cavalry accustomed to attack being taught to fight on foot and await attack. The Prince closes the argument by characterising the whole thing in the words of

one of the old school, as "unnütze Witze, gefährlicher Schwindel." The letter closes as follows :—

"The infantry is, and remains, the army. The cavalry is, and remains, only an auxiliary to the infantry. Cavalry can only perform its most brilliant service, attain its greatest glory, if it recollects that it exists only for the infantry, should be active for it alone, whether it is combined in divisions or attached to an infantry division, or split up into small patrols in close fellowship with an infantry outpost. It must never forget that it cannot be independent entirely, but sooner or later will be dependent on infantry for support if driven in, and that it cannot be pushed to the front unless supported by infantry. We can thus afford to look on calmly at neighbouring Powers which are turning the bulk of their cavalry into mounted infantry. It will be bad infantry and will be far behind the worst cavalry."

[Twentieth Letter.]

THE APPORTIONING OF HORSE ARTILLERY TO THE
CAVALRY DIVISION.

THE Prince opens this, his last letter on cavalry, by remarking that he has spoken about horse artillery in his letters on artillery, but there are some points in connection with it that he cannot speak about unless he introduces remarks on cavalry.

In the war of 1870 we find horse artillery attached to cavalry divisions in various ways—divisions of 24 squadrons with 18 guns, 36 squadrons with 12 guns (guards), 24 with 12, 20 with 6, 2 of 16 with 6, and 1 of 24 with 6. Again the Baden, Würtemberg and Bavarian cavalry brigades had 6 guns each, or sometimes there were brigades with no permanent horse artillery at all. There is an old theory that every 1,000 sabres should have 3 to 4 guns attached, but on what grounds no one knows. The regulations leave this question open, but lay down that one battery might be attached to each division. To gain some insight on this head, the Prince reviews the action of a cavalry division in

battle. The drill book in its remarks on the cavalry combat always assumes *one* object of attack only, and this the horse artillery must open fire on before the attack, and it gets time to do this by being pushed to the front as soon as the enemy is sighted, or at least during the time in which the cavalry division is leaving its order of march and forming its lines. The drill book also lays down that the horse artillery should take up only one position, from which circumstances, the Prince says, it would appear that one battery should suffice. But the division does not attack one object with all the squadrons: brigades may be detached and often regiments, especially if the division is screening its own army. In such cases a single battery might become an impediment instead of a help to the division. The Guard Dragoon Brigade in 1870 was pushed to the front till August 13th without artillery at all; but when, on August 13th, it received orders to seize and hold Dieulouard with the railway junction and bridge over the Moselle, a battery of horse artillery was despatched to the brigade at once. Again, it may happen that to each brigade a special task may be assigned, necessitating its marching on a road by itself. In this case the Prince would attach to the division as many batteries as there were brigades. He then says that he hopes no one now-a-days would be such a fool as to split up a battery of horse artillery. A division of guns by itself is useless in any case if one considers its fire effect. A typical formation for a division is to march a brigade and its battery in each of two parallel, or nearly so, roads, and let the third brigade follow with its battery in rear of the centre. Prince Kraft goes on to say:—

“A more special reason why more than one battery should be attached is the wear and tear consequent to a single battery if it is with a cavalry division for a whole campaign. Think of the position of the battery chief. No arm requires more care and attention on the march in quarters or in action, or necessitates the constant presence of its commander so much as the artillery. There are horses, men, carriages, guns, ammunition and stores to occupy his attention, and the comparatively junior-senior

lieutenant cannot have the same amount of experience. One must have observed in the war the effect on order when one ceased to hear the well-known and feared voice of the captain. One must have experienced how fire discipline ceases in the battery, and soon an irregular, badly aimed, uncontrollable, uncorrected and therefore ineffective independent firing begins when the men no longer get the right directions from their chief who is watching the fire. While so much demands the attention of the battery chief in action with his battery, he must accompany the leader of the cavalry division to confer with him on the tactical handling. Should the division be on the march, the commander rides forward on getting information of the enemy, and if the battery chief is not with him he must send an order to him : the result might be that the battery would arrive too late to be of much service. Hence, the advantage of the battery chief being with the division leader : the position for the guns will, as a rule, be where the latter establishes himself. Should, however, there be three batteries, then the task is much simpler. The colonel commanding, who has his adjutants, rides with the cavalry leader and sends for the batteries by his adjutants. He confers with him about the enemy, ranges, ground, plan of attack, &c., &c. It is not necessary for the commander of the battery to be with the batteries on the march, therefore he has not the twofold task which devolves on a single battery commanding officer."

Take the case of a cavalry division by itself pushed on several days' march ahead of the army. It requires to be well supported by artillery to carry its mission out. Three batteries are the minimum that it requires, for should it meet an enemy superior in force it will find difficulty in making headway. Since the last war the artillery has been bound up more closely by "abtheilungen" than ever (3 to 4 batteries). Each abtheilung has now got its own paymaster, and conducts its own business as regards supplies, stores, &c. It conducts its own mobilisation, and has the management of its own cash transactions. Thus a single battery detached from the abtheilung is in the same position as a squadron or company detached from its regiment for the

whole campaign. The work which would now devolve on the battery chief would be enormous.

"Most infantry divisions," says the Prince, "enter a campaign complete and together as in peace. We hope the cavalry may do the same. How can we wonder at artillery not being properly used if on mobilisation we separate it from its *abtheilung* for the whole war." Again, the Prince remarks that such a battery will fare badly when the time for decoration-rolls and prize-money comes. The presence of the *abtheilung* commander with the cavalry division leader is a sure guarantee that the service and merits of his men will not be forgotten or overlooked.

The Prince then says that a less number than three batteries, which must be of the same *abtheilung*, should not be attached to a cavalry division be it of 20, 24 or 36 squadrons, or whether in two or more brigades. Weak divisions of say 16 squadrons will not be sent far beyond the front, and therefore no guns should be attached to them unless they are required for special service in an action, in which case a battery or *abtheilung* from the corps artillery may be attached temporarily. The advantage of having a large proportion of horse artillery in the corps artillery is thus twofold. Should it be necessary to attach some of it to cavalry divisions they are at hand: when these cavalry divisions are in reserve during an engagement the horse artillery revert to their place in the corps artillery and swell the line of guns. The action of horse artillery of the Grand Corps at Sedan, St. Privat and Le Bourgat is a good instance of this rôle.

In conclusion the Prince does not advocate two batteries under a colonel being attached to a cavalry division. The third battery must necessarily be left behind and play the rôle of a "luckless appendix, like a lost sheep." It would also be better to attach, if necessary, an entire *abtheilung* to a weak division than to split it up.

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